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JAPANESE BANKS IN THE UNITED STATES: AN OVERVIEW

Summary

The large and sophisticated U.S. financial market has provided significant growth opportunities for Japan's major banks over the past 15 years. Today, their 107 full-scale American banking offices hold over 6 percent of all domestic bank assets and just a slightly lower share of deposits. The climb to this position was certainly aided by the preferential treatment foreign banks received until the late 1970s. A handful of acquisitions has also helped, but the main source of growth has been internal expansion geared to the banking needs of Japanese corporate clients in the United States. Increasingly stiff competition for this business is forcing Japanese banks to try and broaden their customer base to include more American corporations -- a job made more difficult by the current turmoil in the U.S. banking industry.

Growth of Foreign Banking

In an almost exact replay of the movement of U.S. banks abroad in the 1960s, overseas banks rapidly expanded their operations in the United States during the 1970s. In December 1972, the 110 foreign banking offices in this country had assets of $26.9 billion, equal to only 3.6 percent of total American banking assets. By the end of the decade, foreign investors were operating out of 333 U.S. offices and accounted for 13.7 percent of the U.S. banking industry's assets or $202.5 billion.

Japanese banks were in the forefront of this advance, doubling their U.S. network over the seven-year span to 66 agencies, branches and subsidiaries, but they, like Canadian banks, still lost ground to European banking organizations. Partly because of several major acquisitions, British and other European banks controlled nearly half of the assets of foreign banks in the United States at year-end 1979 compared with roughly a fourth in December 1972, while banks headquartered in Japan, which had held about half of all foreign banking assets, ended the 1970s with just over a third.

Whether European, Japanese or Canadian, foreign banks had common motives for expanding their U.S. presence during the 1970s. At the top of the list was the desire to maintain and strengthen business relationships developed at home when corporate clients moved into the American market, initially as exporters requiring trade financing and later as investors needing not only funding but also help in getting established. Foreign banks also quickly realized that a dollar funding base in the United States was necessary if they were to compete successfully as international lenders in a world dominated by dollar transactions. They recognized as well that domestic money markets provided unrivaled possibilities for generating funds and that the American economy offered enormous investment opportunities. Moreover, the regulatory climate in the United States helped attract foreign banks. Until the passage of the International Banking Act (IBA) of 1978, regulation and supervision of U.S. agencies and branches of offshore banks was in the hands of the states. These offices were not subject to Federal Reserve Board reserve requirements, deposit interest rate ceilings or the ban on multistate operations.

The push or pull of these factors had brought 23 Japanese banks to the United States by the close of the 1970s, with another scheduled to arrive in 1981. All 13 city (nationwide) commercial banks were represented. Seven, in fact, had arrived in the 1950s, led by the Bank of Tokyo, Ltd., Mitsubishi Bank, Ltd. and Sumitomo Bank, Ltd. in 1952 and followed in quick order by Sanwa Bank, Ltd., Fuji Bank, Ltd., Mitsui Bank, Ltd. and Taiyo Kobe Bank, Ltd. Tokai Bank, Ltd. opened an office in the mid-1960s and was joined in the early 1970s by Japan's five other city banks -- Hokkaido Takushoku Bank, Ltd., Dai-Ichi Kangyo Bank, Ltd., Daiwa Bank, Ltd., Kyowa Bank, Ltd. and Saitama Bank, Ltd. Six of the seven Japanese trust banks moved into the U.S. market with the second wave of city banks; so did all three long-term credit banks. The last Japanese banks to establish an American presence were the country's two largest regional commercial banks -- the Bank of Yokohama, Ltd. (1979) and Hokuriku Bank, Ltd. (1981).

Since Japanese banks initially came to the United States to service the trade financing requirements of their domestic clientele, it is not surprising that virtually every one of them opened its first American office in New York City. The country's top international finance center, New York City also housed the U.S. headquarters of Japan's trading companies, steel makers, consumer electronics firms, textile producers and a cross section of other major exporters. In rapid succession or even simultaneously, though, Japanese banks established a base in California, the main entry and exit points for bilateral trade and home for a long list of U.S. sales subsidiaries of Japanese

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corporations, including the automotive makers. The state, moreover, attracted many of the manufacturing plants set up by Japanese companies during the 1970s.

State banking laws as well as market considerations had a hand in determining the location of the U.S. offices of Japanese banks. Both New York and California allowed foreign banking operations under conditions described below, but until October 1973, Illinois, a potentially attractive site for Japanese banks interested in tapping the Midwest market, only permitted foreign banks to establish subsidiaries, which are more less capital- and staff-intensive than branches and agencies. (Agencies can arrange loans, but they are not allowed to accept domestic deposits other than credit balances incidental to their customers' banking transactions. Branches generally offer the services of commercial banks, but they usually operate only in the wholesale banking and money markets. Subsidiaries in this context are commercial banks.) Texas had an equally restrictive law on its books, effectively denying Japanese banks entry to the Sunbelt and its fast-multiplying trade and investment ties with Japan. The Southeast, another region of rapidly growing commercial and manufacturing importance to Japanese companies, was also basically off-limits to the banks since states, at most, permitted the opening of agencies.

Like other foreign banks allowed to operate in New York under the state's banking reciprocity law, Japanese banks had to choose between a branch and an agency. Twenty of the 24 Japanese banking organizations represented in New York City opted for a branch, reflecting their interest in conducting a wholesale lending business funded in part through domestic money markets. The New York City offices of the four other Japanese banks -- the Bank of Tokyo, Fuji Bank, the Industrial Bank of Japan, Ltd. and Chuo Trust & Banking Co., Ltd. -- were licensed by the state as agencies, but they are now considered branches by the Federal Reserve.

The 21 Japanese banks moving into California did not enjoy the same organizational freedom they did in New York. While California law allowed foreign banks to set up branch offices, it also specified that branches must have federal deposit insurance. Since the Federal Deposit Insurance Corp. (FDIC) was not authorized to insure foreign bank branches until the enactment of the 1978 International Banking Act, Japanese banks had no choice except to open agencies.

Without deposit-taking offices, however, Japanese banks in California were hamstrung in their ability to pursue wholesale lending opportunities. To gain the necessary deposit base, the Bank of Tokyo and Sumitomo Bank established wholesale-oriented commercial bank subsidiaries in San Francisco in 1953. Mitsubishi Bank, Sanwa Bank, Mitsui Bank, Tokai Bank and Kyowa Bank all followed suit in the 1970s. By then, these banks as well as the two Japanese pioneers in California had enough confidence in their long-run financial prospects and their knowledge of the market to go after a slice of the state's vast retail trade in addition to its expanding wholesale business.

Corporate confidence in the ability of Japanese commercial banks to compete successfully in the retail market did not extend to New York. Bank executives quickly concluded that trying to win retail customers on the home ground of many of this country's biggest banks was a prescription for continuing losses. The Bank of Tokyo, Fuji Bank, the Industrial Bank of Japan and Daiwa Bank did set up full-service commercial banks in the heart of Manhattan, but their strength has always been wholesale banking.

A More Equal Footing

The seemingly nonstop expansion of foreign banking operations in the United States during the 1970s generated corresponding pressure for legislation curbing the competitive advantages that accrued to foreign banks. The final product of this campaign was the 1978 International Banking Act, which was designed to provide a framework for federal regulation of foreign banking activities as well as more equitable treatment of foreign and domestic banks. To this end, the IBA incorporated the concept of national treatment: to the extent possible, foreign banks would be subject to the same restrictions and eligible for the same privileges as American banks.

As for restrictions, Congress prohibited foreign banks from establishing or acquiring commercial banks outside their "home state," bringing them in regulatory line with domestic banks, which are effectively prevented from operating full-service banking facilities in more than one state. The IBA also specified that only branches in the home state can accept deposits on an unrestricted basis. Offshore banks can still open branches and agencies in locations beyond their home state, but out-of-state branches are limited to accepting the same types of deposits as American banks with Edge Act corporation offices -- generally, foreign currency deposits and deposits related to international banking and financial activities. In perhaps its most controversial move, Congress paired restrictions on the future interstate operations of foreign banks with a waiver for existing offices. Left in place, therefore, was the very multistate banking network that had given overseas banks a competitive edge in the U.S. marketplace.

Of far greater competitive consequence to foreign banks was Congress' decision to extend reserve requirements to their branches and agencies. While Federal Reserve member banks, including the U.S. subsidiaries of foreign banks, must maintain a significant portion of their deposits in interest-free accounts, foreign-controlled branches and agencies, until the advent of the IBA, were under no such obligation, giving them a lower cost of funds. The IBA's requirement that foreign bank branches engaged in retail banking obtain FDIC deposit insurance eliminated another cost-of-funds advantage. As partial offsets to these changes, however, branches and agencies of foreign banks gained access to the discount window and payment services provided by the Federal Reserve system. Banks from abroad also indirectly won the right to open branches in California because they were now eligible for insurance protection.

Another restrictive equal-treatment provision of the IBA prevented foreign banks from pursuing additional U.S. nonbanking activities of the type prohibited to domestic banks, such as investment banking or buying into a company whose business is unrelated to banking. On the privileges side, though, the new legislation allowed foreign banks to establish federally licensed and supervised branches or agencies in states where they are not already operating, provided this activitiy is not prohibited at the state level. It also permitted foreign banks to establish Edge Act corporations, which enable banks to conduct international business outside their home state.

While industry analysts and U.S. regulatory authorities agree that the IBA placed foreign banks on a more equal competitive footing with American banks, at least two areas of perceived preferential treatment were left untouched by the legislation. One involves the low capital ratios of many big foreign banks operating in the United States. The other centers on the relatively free hand foreign banks have to take over American banks.

It is a fact of life in the banking business that banks with low capital ratios have a significant competitive advantage over banks with higher capitalizations; they can generally charge lower loan rates and still achieve the same rates of return as their less highly leveraged counterparts. Critics have long complained that many foreign banks, including Japanese institutions, use their low capital ratios to "buy" corporate loan business in the United States through price cutting. American money-center banks, it is added, can hold their own with these foreign competitors because they too are rather highly leveraged. Regional and retail banks, however, are at a disadvantage since they normally have much higher capital ratios.

U.S. bank supervisors, while acknowledging the growth implications of different capital ratios, have generally discounted the importance of this competition issue. It is often argued that the lower capital ratios of Japanese and European banks are, in a real sense, a reflection of the lower risks these banks face. In addition, differences in accounting methods, regulatory requirements and other factors make it difficult to compare the capital positions of foreign and domestic banks. For these reasons, federal authorities have not tried to extend the capital requirements applicable to domestic banking organizations, including the U.S. subsidiaries of foreign banks, to overseas banks, although they do take capital positions into account when reviewing applications for takeovers. Neither have they been inclined to force branches of foreign banks to maintain assets at some percentage above liabilities as a proxy for capital requirements -- a proposal periodically floated in the U.S. banking community.

That foreign banks have opportunities to purchase medium-to-big American banks not available to other domestic institutions is also no cause for alarm, federal regulators have maintained. This inequity is a partial result of U.S. banking laws, which prohibit acquisitions across state lines by domestic banks and bank holding companies as well as by foreign banks that already have U.S. banking subsidiaries. Antitrust considerations also make it difficult for a large bank to buy another bank of significant size in the same state, even if that bank is failing. To the extent that U.S. banking agencies have proposed a change in this situation, it has been in the direction of allowing domestic banks to take over out-of-state problem banks, rather than placing curbs on foreign bank acquisitions.

Interest in foreign takeovers has flared repeatedly over the past ten years, not just because overseas banks can make acquisitions that are off-limits to their domestic counterparts but out of concern that the change in ownership nationality will lead to supervisory problems and a different loan orientation. Interest turned to worry in some quarters in 1979 when the Federal Reserve approved three significant transactions: the acquisition of Union Bank of Los Angeles, now the 38th largest U.S. bank, by England's Standard Chartered Bank Ltd.; Hongkong and Shanghai Banking Corp.'s purchase of a majority interest in Buffalo, New York-headquartered Marine Midland Banks Inc., the fifteenth biggest bank; and the takeover of the National Bank of North America, Jamaica, New York, by National Westminster Bank Ltd. of London. Questions about U.S. bank acquisition policies were again raised in the

Congress and elsewhere when another London bank, Midland Bank Ltd., won approval in 1981 to buy a controlling share of San Francisco's Crocker National Corp., this country's fourteenth largest bank.

These transactions and a long list of less-publicized acquisitions highlight the fact that many large foreign banks previously unrepresented in the United States have found takeovers a relatively low-cost way to gain an immediate presence in attractive American banking markets. The acquisition route has also proved to be an efficient method of intrastate expansion for foreign banks that already own U.S. subsidiaries -- particularly Japanese banks in California, where six of the eight Japanese-owned banking organizations have grown through merger as well as internal expansion. (The exceptions are the Kyowa Bank of California and the Dai-Ichi Bank of California, which was the Japan California Bank until December 1981 when Dai-Ichi Kangyo, a 4.5 percent shareholder, bought out 36 local investors.)

The Bank of Tokyo's California First Bank, currently the 79th largest bank in the country and the seventh in California, is an outgrowth of the 1975 acquisition of medium-ranked Southern California First National Bank of San Diego, as well as the 1983 purchase of 18 branches from the Bank of California. The Sumitomo Bank of California has moved up to number 136 on the rolls of big U.S. banks and to number ten in the state through a similar strategy; in 1977 it bought 19 Bank of California branches and four years later acquired Pacific City Bank, a small Huntington Beach bank. Mitsui Bank of California also became a major player in 1981 when it took over the much larger Manufacturers Bank in Los Angeles and became Mitsui Manufacturers Bank.

Another important California bank is Golden State Sanwa Bank, the product of Golden State Bank's 1978 merger into Sanwa Bank of California and the later (1981) purchase of First City Bank in Rosemead. Two acquisitions of small banks -- Hacienda Bank of La Habra in 1976 and First National Bank of San Diego County in 1981 -- also boosted the operations of Mitsubishi Bank of California. Tokai Bank of California similarly expanded its banking network through the 1975 purchase of Los Angeles-based Centinela Bank and the 1981 takeover of Continental Bank, headquartered in Alhambra.

Despite these nine mergers, Japanese banks until recently have escaped the harsh criticism that has accompanied many foreign bank takeovers in the United States. All of the acquisitions involved small or lower-ranking medium-sized banks, which helped to contain negative reactions. Moreover, the takeovers were said to be friendly, in large part, it appears, because Japanese banks almost uniformly paid several times book value for their acquisitions.

The twin issues of low capital ratios and major acquisitions coalesced for Japanese banks earlier this year when the Federal Reserve narrowly cleared Mitsubishi Bank's $282 million takeover of BanCal Tri-State Corp., the holding company for the Bank of California. In approving the transaction, the three-member majority noted that the Japanese bank has a capital position "well below the board's capital guidelines for U.S. multinational bank holding companies." They added that while the board believes foreign banks seeking acquisitions in the United States should meet the same general standards of soundness required of domestic banks, Mitsubishi Bank's application was strengthened by its low loan losses, significant deposit base and strong liquidity position. In addition, it was pointed out, the bank is committed to increasing the capital position of the Bank of California, the number-eight bank in the state and 85th nationwide. The two dissenting governors argued, however, that highly leveraged foreign banks may have an unfair advantage over comparable domestic institutions in acquiring American banks. A U.S. bank with a financial position similar to Mitsubishi Bank's would not be allowed to acquire BanCal, they maintained.

Evolving Strategy of Japanese Banks

At midyear 1983, the U.S. offices of Japanese banks accounted for 5.9 percent of aggregate domestic banking assets or $118.2 billion, compared with 4.8 percent just two years earlier. Five-sixths of this total was held by the banks' 32 branches and 28 agencies. These offices, located primarily in New York City and Los Angeles, remained the major asset generators even as the 15 Japanese-owned commercial banks and Edge Act corporations expanded their business through the early 1980s. Of the assets held by these subsidiaries, most were in the hands of the Bank of Tokyo Trust Co., which is the 78th biggest U.S. bank with assets of $4.5 billion, California First Bank ($4.2 billion) and Sumitomo Bank of California ($2.3 billion).

Given their wholesale lending orientation, it is no surprise that branches and agencies also accounted for the dominant share of the $29.3 billion in business loans on the books of the U.S. offices of Japanese banks in June 1983. What is perhaps unexpected is that outstanding commercial and industrial loans grew at a relatively slow pace in the early 1980s, leaving Japanese banks with just a slightly bigger share of total domestic business loans in mid-1983 -- 7.4 percent -- than two years before (7 percent). One possible explanation for the slowdown is that Japanese banks are booking fewer of their American loans in the United States. In the past, Japanese banks have differed from their European and Canadian competitors in booking most loans to U.S.-based borrowers domestically rather than at "shell" branches in the Caribbean or at home, but this practice might be changing.

An equally plausible explanation is that Japanese banks, generally known for their conservative loan portfolios, did not get caught up in the lending frenzy to U.S. energy companies, real estate firms and agricultural producers -- all big borrowers in recent years and now the source of problem loans for a growing list of major American banks. Moreover, they apparently started to rein in credit growth in some potentially troublesome areas of the economy and dump loans made in others before their American counterparts. It appears in short that Japanese banking offices did not stray far from their traditional portfolios, which are weighted toward the U.S. sales and manufacturing subsidiaries of Japanese corporations. Although the mix obviously varies from bank to bank, perhaps half of the commercial and industrial loans booked here by Japanese banks go to these customers. Loans to companies outside the United States, particularly in Latin America, make up a big part of the other half, with loans to American manufacturers constituting the smallest slice of the representative portfolio.

While this typical portfolio has insulated Japanese banks operating in the United States from the serious financial difficulties experienced by big-name U.S. banks, it has meant slim earnings at a time when parent organizations are looking to the American market for income growth to offset profit erosion at home caused by reduced corporate borrowing. The loan demand generated by the American affiliates of Japanese companies is obviously enormous, but so is the competition, which includes not only the 24 Japanese banks represented here but also an increasing number of U.S. institutions. Expanded retail banking operations in California have apparently done little to bolster Japanese bank profits in this country, again because of stiff competition for the target clientele: Japanese corporations. One bank after another has therefore concluded that diversification -- both of customers and services -- represents the only avenue of income growth open to them.

Portfolio expansion in the area of loans to big American corporations, particularly Fortune 500 manufacturers, is the first priority. In soliciting this business, Japanese banks generally make no pretense of being able to offer unique financial products and services or below-market loan rates. What they can provide is expertise on Japanese market strategies. By parlaying this unrivaled strength, the banks hope to develop relationships that will eventually lead to their inclusion in the core group of lenders to top American corporate customers.

Japanese banks are also trying to develop a clientele among domestic manufacturers with sales between $5 million and $200 million. The Bank of California's strong position in middle-market corporate banking was its main attraction for Mitsubishi Bank. Gaining access to medium-sized companies was also behind Fuji Bank's $425 million purchase early this year of Walter E. Heller International Corp.'s two commercial finance units. These subsidiaries gave the bank about 10,000 new customers and a network of 68 branches in the United States and 30 overseas.

The U.S. offices of Japanese banks are also contacting regional banks to explore the possibility of participating in syndicated loans to local customers. Moreover, they are beefing up existing services, particularly corporate trust activities and merger and acquisition assistance. Diversification into new business areas like equipment leasing and venture capital are on the agenda as well.

Whether these moves will produce the profit increases Japanese banks are seeking in the United States is uncertain at this transistional time for the domestic banking industry. Competition for prime corporate business at whatever level has always been fierce, and it is becoming more so as financial deregulation proceeds. Japanese banks, however, are in the American market for the long haul. They are prepared to adapt to changing conditions, and they are willing to wait for the dust from deregulation to settle.

For further information, contact Susan MacKnight.

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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Table 1: U.S. Offices of Japanese Banks

Parent	Location	Type of Office	Year Operational	Notes
Bank of Tokyo, Ltd.				
	San Francisco, CA*	Commercial bank: California First Bank	1953	131 domestic branches; 4 branches overseas
	New York, NY	Commercial bank: Bank of Tokyo Trust Co.	1955	4 domestic branches; 2 branches overseas
	Chicago, IL	Commercial bank: Chicago-Tokyo Bank**	1964	
	Coral Gables, FL	Edge Act corporation: Bank of Tokyo International, U.S.A.	1982	
	Houston, TX	Edge Act corporation: Tokyo Bancorp International (Houston) Inc.	1976	
	Portland, OR	Branch	1965	
	Seattle, WA	Branch	1961	
	Los Angeles, CA	Agency	1960	
	San Francisco, CA	Agency	1959	
	Coral Gables, FL	Agency	1979	
	Honolulu, HI	Agency	1978	
	New York, NY	Agency***	1952	
	Washington, DC	Representative	1971	
	Atlanta, GA	Representative	1977	
	Chicago, IL	Representative	1961	
	Houston, TX	Representative	1961	
Bank of Yokohama, Ltd.				
	New York, NY*	Branch	1979	
	Los Angeles, CA	Representative	1982	
Chuo Trust & Banking Co., Ltd.				
	New York, NY*	Agency***	1977	
Dai-Ichi Kangyo Bank, Ltd.				
	Los Angeles, CA*	Commercial bank: Dai-Ichi Kangyo Bank of California	1981	4 domestic branches
	Chicago, IL	Branch	1971	
	New York, NY	Branch	1971	
	Los Angeles, CA	Agency	1971	
	San Francisco, CA	Representative	1983	
	Houston, TX	Representative	1976	

Parent	Location	Type of Office	Year Opera-tional	Notes
Daiwa Bank, Ltd.	New York, NY*	Commercial bank: Daiwa Bank Trust Co.	1977	1 domestic branch
	New York, NY	Branch	1972	
	Los Angeles, CA	Agency	1972	
	Houston, TX	Representative	1977	
Fuji Bank, Ltd.	New York, NY*	Commercial bank: Fuji Bank & Trust Co.	1974	2 domestic branches
	San Francisco, CA	Edge Act corporation: Fuji Bank International, Inc.	1983	
	Chicago, IL	Branch	1977	
	Los Angeles, CA	Agency	1972	
	New York, NY	Agency***	1956	
	San Francisco, CA	Representative	1982	
	Miami, FL	Representative	1984	
	Atlanta, GA	Representative	1983	
	Houston, TX	Representative	1977	
	Seattle, WA	Representative	1978	
Hokkaido Takushoku Bank, Ltd.	New York, NY	Branch	1970	
	Seattle, WA	Branch	1977	
	Los Angeles, CA*	Agency	1974	
	Chicago, IL	Representative	1976	
	Houston, TX	Representative	1977	
Hokuriku Bank, Ltd.	New York, NY	Branch	1981	
Industrial Bank of Japan, Ltd.	New York, NY*	Commerical bank: Industrial Bank of Japan Trust Co.	1974	1 domestic branch; 1 branch overseas
	Los Angeles, CA	Agency	1974	
	New York, NY	Agency***	1966	
	San Francisco, CA	Representative	1983	
	Washington, DC	Representative	1983	
	Atlanta, GA	Representative	1983	
	Chicago, IL	Representative	1983	
	Houston, TX	Representative	1974	

Parent	Location	Type of Office	Year Opera- tional	Notes
Kyowa Bank, Ltd.				
	Los Angeles, CA*	Commercial bank: Kyowa Bank of California	1978	1 domestic branch
	New York, NY	Branch	1973	
	Los Angeles, CA	Agency	1974	
	San Francisco, CA	Representative	1983	
	Chicago, IL	Representative	1977	
Long-Term Credit Bank of Japan, Ltd.				
	New York, NY*	Branch	1974	
	Los Angeles, CA	Agency	1977	
Mitsubishi Bank, Ltd.				
	Los Angeles, CA*	Commercial bank: Mitsubishi Bank of California	1972	24 domestic branches; 1 domestic loan production office
	San Franciso, CA	Commercial bank: Bank of California	1984	20 domestic branches; 3 branches and 7 other offices overseas
	Chicago, IL	Branch	1977	
	New York, NY	Branch	1952	
	Los Angeles, CA	Agency	1962	
	Houston, TX	Representative	1978	
Mitsubishi Trust & Banking Corp.				
	New York, NY*	Branch	1974	
	Los Angeles, CA	Agency	1975	
Mitsui Bank, Ltd.				
	Los Angeles, CA*	Commercial bank: Mitsui Manufacturers Bank	1974	11 domestic branches
	Honolulu, HI	Commercial bank: CB Bancshares Inc.**	n.a.	
	New York, NY	Branch	1956	
	Seattle, WA	Branch	1977	
	Los Angeles, CA	Agency	1971	
	Chicago, IL	Representative	1976	
	Houston, TX	Representative	1977	

Parent	Location	Type of Office	Year Operational	Notes
Mitsui Trust & Banking Co., Ltd.				
	New York, NY*	Branch	1974	
	Los Angeles, CA	Agency	1983	
Nippon Credit Bank, Ltd.				
	New York, NY*	Branch	1977	
	Los Angeles, CA	Agency	1979	
Saitama Bank, Ltd.				
	New York, NY	Branch	1974	
	Los Angeles, CA	Agency	1974	
	Chicago, IL	Representative	1978	
Sanwa Bank, Ltd.				
	San Francisco, CA*	Commercial bank: Golden State Sanwa Bank	1972	31 domestic branches
	Honolulu, HI	Commercial bank: Liberty Bank**	n.a.	
	Chicago, IL	Branch	1974	
	New York, NY	Branch	1956	
	San Francisco, CA	Agency	1953	
	Houston, TX	Representative	1977	
Sumitomo Bank, Ltd.				
	San Francisco, CA*	Commercial bank: Sumitomo Bank of California	1953	46 domestic branches; 1 branch overseas
	Honolulu, HI	Commercial bank: Central Pacific Bank**	n.a.	
	Chicago, IL	Branch	1975	
	New York, NY	Branch	1952	
	Seattle, WA	Branch	1977	
	San Francisco, CA	Agency	1972	
	Atlanta, GA	Representative	1984	
	Houston, TX	Representative	1977	
Sumitomo Trust & Banking Co., Ltd.				
	New York, NY*	Branch	1971	
	Los Angeles, CA	Agency	1980	

Parent	Location	Type of Office	Year Operational	Notes
Taiyo Kobe Bank, Ltd.				
	New York, NY*	Branch	1958	
	Seattle, WA	Branch	1974	
	Los Angeles, CA	Agency	1970	
	Chicago, IL	Representative	1976	
	Houston, TX	Representative	1965	
Tokai Bank, Ltd.				
	Los Angeles, CA*	Commercial Bank: Tokai Bank of California	1974	14 domestic branches
	Chicago, IL	Branch	1980	
	New York, NY	Branch	1965	
	Los Angeles, CA	Agency	1972	
	Houston, TX	Representative	1980	
Toyo Trust & Banking Co., Ltd.				
	New York, NY*	Branch	1976	
	Los Angeles, CA	Agency	1980	
Yasuda Trust & Banking Co., Ltd.				
	New York, NY*	Branch	1977	
	Los Angeles, CA	Agency	1980	

*City is in the bank's "home state." This designation was required by the International Banking Act of 1978.

**Affiliated bank.

***Licensed as an agency but considered a branch by the Federal Reserve Board.

****Formerly the First Pacific Bank of Chicago, but downgraded from a commercial bank subsidiary to a branch after Dai-Ichi Kangyo selected California as its home state.

Source: Annual reports.

Table 2: Profile of Japanese Banking Activity in the United States

(in billions of dollars)

	Assets	Deposits	Business Loans
Japanese Banks in the United States			
June 1983	$118.2	$57.3	$29.3
June 1982	100.5	44.1	28.0
June 1981	83.8	30.0	24.1
All Foreign Banks in the United States			
June 1983	324.4	179.0	86.2
June 1982	287.8	148.6	84.0
June 1981	263.7	126.0	70.0
All Banks in the United States			
June 1983	2,003.2	1,443.8	395.9
June 1982	1,854.7	1,325.8	386.7
June 1981	1,736.9	1,235.5	345.5
Ratio of Japanese Banks to All Foreign Banks			
June 1983	36.4%	32.0%	34.0%
June 1982	34.9	29.7	33.3
June 1981	31.8	23.8	34.4
Ratio of All Foreign Banks to All U.S. Banks			
June 1983	16.2	12.4	21.8
June 1982	15.5	11.2	21.7
June 1981	15.2	10.2	20.3
Ratio of Japanese Banks to All U.S. Banks			
June 1983	5.9	4.0	7.4
June 1982	5.4	3.3	7.2
June 1981	4.8	2.4	7.0

Source: American Banker. Reprinted with the permission of the American Banker. Copyright American Banker, February 17, 1983; and February 23, 1984.

Table 3A: Assets of U.S. Offices of Japanese Banks*

(in millions of dollars)

	June 1980	June 1981	June 1982	June 1983
1. Bank of Tokyo, Ltd.	n.a.	$18,072.0	$18,514.6	$20,102.4
Bank of Tokyo Trust Co.	n.a.	3,939.9	4,060.3	4,517.0
California First Bank	n.a.	3,751.3	3,798.4	4,158.9
Tokyo Bancorp International (Houston) Inc.	n.a.	7.8	6.5	5.9
Bank of Tokyo International, U.S.A.	--	--	--	6.3
Branches and Agencies	$8,718.8	10,373.0	10,649.4	11,414.3
2. Fuji Bank, Ltd.	n.a.	6,920.1	9,303.9	10,877.9
Fuji Bank & Trust Co.	n.a.	1,313.9	1,605.0	1,818.3
Fuji Bank International, Inc.	--	--	--	14.5
Branches and Agencies	4,398.8	5,606.2	7,698.9	9,045.1
3. Mitsubishi Bank, Ltd.	n.a.	7,894.1	9,854.4	10,335.9
Mitsubishi Bank of California	n.a.	483.1	478.2	564.4
Branches and Agencies	4,302.7	7,411.0	9,376.2	9,771.5
4. Sanwa Bank, Ltd.	n.a.	5,298.3	5,871.2	10,161.7
Golden State Sanwa Bank	n.a.	766.4	874.8	1,193.6
Branches and Agencies	2,488.5	4,531.9	4,996.4	8,968.1
5. Dai-Ichi Kangyo Bank, Ltd.	3,523.5	5,238.6	7,755.9	8,610.1
Dai-Ichi Kangyo Bank of California	--	--	106.9	131.4
Branches and Agencies	3,523.5	5,238.6	7,649.0	8,478.7
6. Mitsui Bank, Ltd.	n.a.	4,720.6	5,353.4	6,905.1
Mitsui Manufacturers Bank	n.a.	1,309.9	1,556.2	1,696.9
Branches and Agencies	2,255.2	3,410.7	3,797.2	5,208.2
7. Sumitomo Bank, Ltd.	n.a.	5,741.1	5,859.5	6,504.8
Sumitomo Bank of California	n.a.	2,073.1	2,185.0	2,341.0
Branches and Agencies	4,599.3	3,688.0	3,674.5	4,163.8
8. Industrial Bank of Japan, Ltd.	n.a.	4,406.5	5,038.4	6,128.4
Industrial Bank of Japan Trust Co.	n.a.	1,027.3	1,361.1	1,431.8
Branches and Agencies	2,330.6	3,379.2	3,677.3	4,496.6
9. Mitsubishi Trust & Banking Corp.	767.9	1,197.9	2,220.3	4,978.0
10. Long-Term Credit Bank of Japan, Ltd.	1,781.4	2,835.5	3,706.7	4,204.3
11. Tokai Bank, Ltd.	n.a.	4,370.7	6,606.4	4,052.9
Tokai Bank of California	n.a.	159.2	377.6	410.9
Branches and Agencies	2,987.1	4,211.5	6,228.8	3,642.0
12. Mitsui Trust & Banking Co., Ltd.	1,254.7	2,141.1	2,335.4	3,678.1

	June 1980	June 1981	June 1982	June 1983
13. Daiwa Bank, Ltd.	n.a.	$2,201.6	$3,110.7	$3,467.9
Daiwa Bank Trust Co.	n.a.	864.6	1,123.1	976.6
Branches and Agencies	$1,045.9	1,337.0	1,987.6	2,491.3
14. Saitama Bank, Ltd.	500.6	1,082.5	1,682.2	2,722.9
15. Taiyo Kobe Bank, Ltd.	2,247.3	2,663.8	2,886.9	2,609.9
16. Yasuda Trust & Banking Co., Ltd.	781.1	1,050.2	1,711.7	2,290.5
17. Nippon Credit Bank, Ltd.	912.2	1,540.0	1,874.2	2,278.6
18. Hokkaido Takushoku Bank, Ltd.	1,006.2	1,618.5	1,218.0	1,784.8
19. Sumitomo Trust & Banking Co., Ltd.	620.9	1,495.5	1,629.5	1,625.6
20. Toyo Trust & Banking Co., Ltd.	487.8	973.0	1,087.6	1,577.6
21. Kyowa Bank, Ltd.	n.a.	1,359.1	1,461.5	1,557.4
Kyowa Bank of California	n.a.	53.8	63.5	64.8
Branches and Agencies	719.9	1,305.3	1,398.0	1,492.6
22. Bank of Yokohama, Ltd.	320.7	622.9	759.0	871.4
23. Hokuriku Bank, Ltd.	--	67.9	287.6	456.3
24. Chuo Trust & Banking Co., Ltd.	189.1	237.1	337.1	416.6
Total	n.a.	83,748.6	100,466.1	118,199.1

Table 3B: Deposits of U.S. Offices of Japanese Banks*

(in millions of dollars)

	June 1980	June 1981	June 1982	June 1983
1. Bank of Tokyo, Ltd.	n.a.	$8,855.8	$9,664.6	$11,318.9
Bank of Tokyo Trust Co.	n.a.	3,254.5	3,297.0	3,840.8
California First Bank	n.a.	3,283.7	3,312.5	3,646.5
Tokyo Bancorp International (Houston) Inc.	n.a.	2.2	2.2	1.7
Bank of Tokyo International, U.S.A.	--	--	--	1.0
Branches and Agencies	$1,019.3	2,315.4	3,052.9	3,828.9
2. Dai-Ichi Kangyo Bank, Ltd.	1,029.9	1,577.4	3,924.9	4,818.7
Dai-Ichi Kangyo Bank of California	--	--	80.4	108.8
Branches and Agencies	1,029.9	1,577.4	3,844.5	4,709.9
3. Mitsubishi Bank, Ltd.	n.a.	2,565.2	3,770.8	4,525.9
Mitsubishi Bank of California	n.a.	431.8	404.8	503.8
Branches and Agencies	1,010.7	2,133.4	3,366.0	4,022.1
4. Sanwa Bank, Ltd.	n.a.	1,819.9	2,571.1	4,503.2
Golden State Sanwa Bank	n.a.	645.8	741.8	1,068.2
Branches and Agencies	847.8	1,174.1	1,829.3	3,435.0
5. Industrial Bank of Japan, Ltd.	n.a.	1,104.8	3,016.6	3,605.8
Industrial Bank of Japan Trust Co.	n.a.	878.1	1,112.9	1,272.4
Branches and Agencies	200.6	226.7	1,903.7	2,333.4
6. Sumitomo Bank, Ltd.	n.a.	3,239.1	2,878.0	3,400.8
Sumitomo Bank of California	n.a.	1,827.9	1,905.5	2,087.8
Branches and Agencies	1,172.7	1,411.2	972.5	1,313.0
7. Mitsui Bank, Ltd.	n.a.	1,952.3	2,383.4	3,011.7
Mitsui Manufacturers Bank	n.a.	1,325.3	1,364.3	1,495.8
Branches and Agencies	376.4	627.0	1,019.1	1,515.9
8. Mitsubishi Trust & Banking Corp.	385.9	323.5	557.1	2,724.3
9. Fuji Bank, Ltd.	n.a.	2,165.5	4,301.2	2,507.3
Fuji Bank & Trust Co.	n.a.	1,107.7	1,397.0	1,556.6
Fuji Bank International, Inc.	--	--	--	3.0
Branches and Agencies	286.8	1,057.8	2,904.2	947.7
10. Tokai Bank, Ltd.	n.a.	914.3	1,906.1	2,439.9
Tokai Bank of California	n.a.	139.5	315.7	374.3
Branches and Agencies	535.8	774.8	1,590.4	2,065.6
11. Daiwa Bank, Ltd.	n.a.	853.3	1,499.2	1,853.1
Daiwa Bank Trust Co.	n.a.	748.2	986.2	781.8
Branches and Agencies	90.1	105.1	512.9	1,071.3

	June 1980	June 1981	June 1982	June 1983
12. Saitama Bank, Ltd.	$87.0	$193.4	$765.1	$1,820.0
13. Mitsui Trust & Banking Co., Ltd.	478.4	984.1	1,288.9	1,644.4
14. Long-Term Credit Bank of Japan, Ltd.	672.5	1,249.8	1,310.9	1,475.4
15. Taiyo Kobe Bank, Ltd.	408.7	577.6	1,180.5	1,228.8
16. Nippon Credit Bank, Ltd.	272.2	379.1	792.8	1,188.1
17. Hokkaido Takushoku Bank, Ltd.	98.4	142.2	207.4	953.8
18. Sumitomo Trust & Banking Co., Ltd.	204.7	248.0	345.8	905.2
19. Toyo Trust & Banking Co., Ltd.	184.6	224.3	295.1	786.8
20. Yasuda Trust & Banking Co., Ltd.	230.4	235.5	151.1	775.1
21. Kyowa Bank, Ltd.	n.a.	149.0	541.5	713.6
Kyowa Bank of California	n.a.	43.5	51.7	53.0
Branches and Agencies	22.8	105.5	489.8	660.6
22. Bank of Yokohama, Ltd.	120.0	239.6	488.3	683.1
23. Hokuriku Bank, Ltd.	--	3.6	105.6	192.3
24. Chuo Trust & Banking Co., Ltd.	5.5	4.3	118.5	189.7
Total	n.a.	30,001.6	44,064.5	57,265.9

Table 3C: Business Loans Outstanding at U.S. Offices of Japanese Banks**

(in millions of dollars)

	June 1980	June 1981	June 1982	June 1983
1. Bank of Tokyo, Ltd.	n.a.	$4,275.5	$5,629.9	$5,805.7
Bank of Tokyo Trust Co.	n.a.	1,607.0	1,860.7	1,775.0
California First Bank	n.a.	850.6	1,172.4	1,386.3
Tokyo Bancorp International (Houston) Inc.	n.a.	2.1	4.1	2.9
Bank of Tokyo International, U.S.A.	--	--	--	0.9
Branches and Agencies	$1,980.6	1,815.8	2,592.7	2,640.6
2. Fuji Bank, Ltd.	n.a.	2,017.2	2,820.5	2,595.2
Fuji Bank and Trust Co.	n.a.	229.8	251.3	366.9
Fuji Bank International, Inc.	--	--	--	3.7
Branches and Agencies	1,759.5	1,787.4	2,569.2	2,224.6
3. Dai-Ichi Kangyo Bank, Ltd.	1,545.2	2,704.6	2,573.9	2,446.8
Dai-Ichi Kangyo Bank of California	--	--	54.6	58.2
Branches and Agencies	1,545.2	2,704.6	2,519.3	2,388.6
4. Mitsubishi Bank, Ltd.	n.a.	1,548.8	1,306.4	2,403.0
Mitsubishi Bank of California	n.a.	89.5	113.9	165.0
Branches and Agencies	1,161.5	1,459.3	1,192.5	2,238.0
5. Mitsui Bank, Ltd.	n.a.	2,336.1	2,425.5	2,401.6
Mitsui Manufacturers Bank	n.a.	489.0	504.0	554.5
Branches and Agencies	1,452.0	1,847.1	1,921.5	1,847.1
6. Sumitomo Bank, Ltd.	n.a.	1,823.0	1,988.3	2,016.7
Sumitomo Bank of California	n.a.	532.7	642.4	631.3
Branches and Agencies	1,315.9	1,290.3	1,345.9	1,385.4
7. Sanwa Bank, Ltd.	n.a.	1,322.8	1,482.7	1,873.0
Golden State Sanwa Bank	n.a.	229.4	242.1	262.8
Branches and Agencies	1,034.7	1,093.4	1,240.6	1,610.2
8. Industrial Bank of Japan, Ltd.	n.a.	1,314.0	1,687.3	1,715.9
Industrial Bank of Japan Trust Co.	n.a.	190.0	228.9	338.6
Branches and Agencies	771.3	1,124.0	1,458.4	1,377.3
9. Taiyo Kobe Bank, Ltd.	663.1	874.9	1,157.8	1,032.9
10. Long-Term Credit Bank of Japan, Ltd.	716.7	683.4	798.1	765.2
11. Daiwa Bank, Ltd.	n.a.	663.5	800.0	752.4
Daiwa Bank Trust Co.	n.a.	70.1	106.7	138.7
Branches and Agencies	631.6	593.4	693.3	613.7
12. Tokai Bank, Ltd.	n.a.	739.0	667.2	732.4
Tokai Bank of California	n.a.	43.4	95.6	111.6
Branches and Agencies	578.7	695.6	571.6	620.8

	June 1980	June 1981	June 1982	June 1983
13. Kyowa Bank, Ltd.	n.a.	$541.0	$623.0	$694.8
Kyowa Bank of California	n.a.	18.7	32.1	22.9
Branches and Agencies	$397.8	522.3	590.9	671.9
14. Sumitomo Trust & Banking Co., Ltd.	84.4	466.0	592.5	623.9
15. Nippon Credit Bank, Ltd.	252.5	405.0	600.3	623.8
16. Mitsubishi Trust & Banking Corp.	215.4	196.4	520.3	527.5
17. Yasuda Trust & Banking Co., Ltd.	374.3	403.0	429.5	513.8
18. Saitama Bank, Ltd.	298.3	324.1	374.3	346.7
19. Hokkaido Takushoku Bank, Ltd.	458.0	355.7	355.0	325.3
20. Bank of Yokohama, Ltd.	54.5	253.7	329.0	324.5
21. Mitsui Trust & Banking Co., Ltd.	271.7	446.8	325.0	244.0
22. Toyo Trust & Banking Co., Ltd.	177.6	200.8	224.6	210.8
23. Hokuriku Bank, Ltd.	--	45.9	143.4	182.6
24. Chuo Trust & Banking Co., Ltd.	92.8	117.1	194.8	179.5
Total	n.a.	24,058.3	28,049.3	29,338.0

*Average assets and deposits for June are used for branches, agencies and Edge Act corporation banks, while June 30 data are used for commercial banks.

**Data are for June 30.

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JEI

REPORT

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Nakasone Unopposed for Second LDP Presidential Term

Prime Minister Yasuhiro Nakasone, overcoming political obstacles that a year ago threatened his ability to continue in office, will be unopposed in Liberal Democratic Party (LDP) presidential elections next month as his opponents found themselves unable to reconcile their differences and muster sufficient votes to oust the incumbent. Mr. Nakasone, who at one time faced the prospect of running against at least three other party members, was the only candidate registered as the October 29 filing deadline passed. This practically assures the prime minister a second term as party president and another two years as the head of the government.

Steamship Co., Ltd. will pair off in order to offer more flexible service without drastically changing sailing schedules. The agreements generally cover Japan-Pacific Southwest routes, leaving the carriers free to compete on other routes. This action has run into U.S. industry objections to the pooling and space-chartering provisions, which are off-limits to U.S. conferences. The Japanese have already submitted their proposal to the FMC and hope to inaugurate service at the start of next year.

The temporary FMC guidelines have attracted a tidal wave of foreign protests, mainly because of the agency's new retaliatory powers. Foreign transportation ministries, including Japan's, have strenuously objected to clauses extending the commission's oversight to intermodal services related to inland cargo transportation. Other battle lines have formed over the issue of retaliating against deferred rate rebates, which are illegal in the United States but generally accepted abroad. The situation is also complicated by the problem of possible FMC intervention against carriers associated (through conference membership) with violators, not just the violating carrier alone. Despite FMC assurances that it will not pursue a guilt-by-association concept, foreign conferences and governments want the language clarified.

U.S. conferences and shippers have deluged the FMC with comments. While generally supportive, the industry has found many a bone to pick among the huge pile of rules. One recurrent theme is that the temporary guidelines contravene Congress' intention to deregulate as many areas as possible. Reporting and record-keeping requirements are criticized as more comprehensive than the old shipping act. New detailed antitrust guidelines for carriers establishing conferences have also attracted industry broadsides. A fusillade of criticism that the clarifications increase antitrust uncertainty has shredded the FMC's sails and led to a skirmish with the Justice Department over jurisdiction.

So far, U.S. shippers and carriers have been slow to form new conferences and associations or to negotiate service contracts based on the new law. The FMC plans to issue final guidelines in mid-December. Until then, it seems likely that the commission will continue to encounter rough seas, and domestic and foreign industries will inevitably be tossed about.

Jon Choy

Energy Consumption in Japan Rebounds

According to the Ministry of International Trade and Industry (MITI), Japan's total energy supply rose 6.6 percent in FY 1983 (ended March 31, 1984). Domestic energy demand also increased, expanding 5.3 percent. The strong increases end a three-year decline in both energy supply and demand, but both are still below FY 1980 levels.

Aggregate supply and demand data for the last five fiscal years (see Table 1) clearly indicate the rebound. MITI calculations show that energy consumption per unit of gross national product (GNP) rose from 190 kiloliters (kl) of oil per Y100 million of GNP in FY 1982 to 195 kl in the last fiscal year. Analysts attribute the increase to the sharp economic upturn and a hike in industrial demand, combined with a cold winter and hot summer. The breakdown of energy demand, presented in Table 2, underscores the role of higher industrial demand (up 4.2 percent), as well as the impact of strong consumer demand (rocketing 10.2 percent). It also shows that most of the increase in demand was for electricity (6.3 percent) and petroleum products (5.9 percent).

Table 3 lists the sources of Japan's energy supply. Strong gains were registered by natural gas and nuclear power (up 15.6 and 11.6 percent, respectively), new energy sources and oil advanced moderately, and coal usage was up marginally. On balance, therefore, natural gas and nuclear power gained ground at the expense of coal, while oil held steady at 61.9 percent of the total supply.

A source-by-source look at the FY 1983 supply picture reveals some interesting points.

- Steam coal use rose by 5.8 percent due to strong demand for electricity, and coking coal consumption started to show signs of life as the recovery absorbed more basic inputs such as steel. Domestic coal production, however, was off again, this time by 3 percent.

- The operating rate for nuclear power plants topped 71.5 percent, a new record and far above the FY 1982 performance of 67.6 percent. Over 20 percent of all electricity generation came from nuclear plants last year.

- Liquefied natural gas constituted more than 90 percent of the total natural gas supply, and demand for gas used in electricity generation or homes rose 16.3 percent.

- Hydroelectric power now accounts for about 15 percent of all generated electricity.

- Alternate energy sources achieved rapid growth in FY 1983, with geothermal energy rising 14.4 percent to the equivalent of 370,000 kl of oil, and solar power up 15.9 percent -- the equivalent of 600,000 kl of oil.

- The composition of petroleum imports changed somewhat, with slower purchases of liquefied petroleum gas offset by rising supplies of naptha, a result of heavy demand by petrochemical makers.

As expected, MITI's figures confirmed the impact of the economic recovery on consumption. More interesting is the fact that the effects of conservation programs were also apparent. Alternate or more efficient energy sources are gaining, while oil's part in the total energy picture is at least being held constant. Lower prices for crude have certainly benefited Japan, but this is unlikely to affect the trend toward diversified energy sources.

Jon Choy

Table 1: Japan's Energy Supply and Demand, FY 1979-1984

(in millions of kiloliters crude oil equivalent)

	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983
Supply	443	429	416	388	414
		(-3.2%)	(-3.1%)	(-6.5%)	(6.6%)
Demand	418	410	394	375	395
		(-1.7%)	(-3.9%)	(-4.8%)	(5.3%)

Table 2: Composition of Japan's Energy Demand, FY 1983

(in millions of kiloliters crude oil equivalent)

	Industry	Transportation	Households	Total
Total	226.9	64.8	103.5	395.1
	(4.2%)	(1.9%)	(10.2%)	(5.3%)
Coal	52.9	---	0.5	53.4
	(0.4%)		(---)	(0.4%)
Petroleum Products	84.1	61.0	35.9	181.0
	(5.9%)	(2.1%)	(13.3%)	(5.9%)
Electricity	76.8	3.5	56.6	136.9
	(4.9%)	(1.8%)	(8.4%)	(6.3%)
Propane	2.5	---	9.6	12.1
	(8.7%)		(8.8%)	(8.7%)
Other	10.5	0.3	0.9	11.7
	(6.0%)	(---)	(12.5%)	(5.4%)

Table 3: Composition of Japan's Energy Supply, FY 1983

(FY 1982 figures in parentheses)

	Actual Units	Crude Oil Equivalent (1,000 kl)	Change from Previous Year (in percent)	Share of Total (in percent)
Total		414,000	6.6%	100.0%
		(388,400)		(100.0)
Coal	96,500	73,300	1.8	17.7
(1,000 mt)	(94,500)	(72,000)		(18.5)
Nuclear	18,400	29,800	11.6	7.2
(1,000 kW)	(17,300)	(27,000)		(6.9)
Natural Gas	31,200	31,200	15.6	7.5
(1,000 kl)	(27,000)	(27,000)		(7.0)
Hydropower	34,200	22,200	5.7	5.4
(1,000 kW)	(33,400)	(21,000)		(5.4)
Alternate Energy	1,400	1,400	7.7	0.3
(1,000 kl)	(1,300)	(1,300)		(0.3)
Petroleum	256,100	256,100	6.5	61.9
(1,000 kl)	(240,400)	(240,400)		(61.9)

Source: Ministry of International Trade and Industry.

JAPAN · ECONOMIC · INSTITUTE

JEI

REPORT

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November 9, 1984

TRILATERAL RELATIONS: A TILT TO THE PACIFIC?

Summary

Over the last two years, economic and political ties between the United States and Japan have assumed a higher profile internationally. This situation can be accounted for not only by the "Ron-Yasu" friendship, but also by more fundamental shifts. Two-way trade between the United States and its Asian partners, for example, exceeded U.S.-European flows for the first time in 1978 and has continued to grow. Japanese leaders increasingly are assuming international leadership roles that are commensurate with the country's economic power. Finally, other nations are turning to Japan for investment and trade opportunities.

With this change in the international climate, Japan has assumed more importance in policymaking circles in the United States. Few foreign policy decisions, whether political or economic, lack a Japanese dimension. However, there have been indications that America's European allies view this situation with growing alarm and interpret it as a shift to the Pacific at the expense of Atlantic interests.

Causes of European Concern

Western Europe cites changing American policies as evidence that the United States has given relations with Japan priority over European Community concerns. While European leaders have harboured reservations since the start of the Reagan administration about its interest in European economic and security issues, recent developments were considered serious enough to bring officials to complain directly to their American counterparts.

The most recent sequence of events identified by concerned Europeans unfolded last January, when then-Under Secretary of State Lawrence Eagleberger, in response to questions at an international conference, admitted to frustrations in dealing with European officials, adding that greater opportunities for cooperation might exist with Japan and other Asian countries. He noted that positions taken by Asian leaders, Japan's in particular, were increasingly consistent with American stances, while Europe appeared to be drifting away from the United States.

Mr. Eagleberger spoke directly of a "shift" in relations toward the Pacific, resulting from such factors as demographic changes in the United States that have given greater importance to the Western states, and this country's increased volume of trade with Asia. More fundamentally, he described his perceptions of a European continent more concerned with its own internal problems than with international concerns. In security terms, he expressed frustrations over differing views of "detente" -- an outdated concept to American policymakers because of its perceived failure to restrain the Soviet Union, but a notion that is still very much favored in Europe and one that is seen as threatened by the increasingly harsh rhetoric and futile policies of the Reagan administration.

Washington did not view the European position as irrevocably divergent, he noted, but these differences contributed to what he called "a shift in the center of gravity and of our foreign policy intention toward the Pacific." He described a future dominated by the United States and Japan, with Western Europe falling further behind in technological development and political leadership. "I think more and more of our attention is going to be drawn toward the Pacific," he said, "and toward trying to manage that competition or cooperation with Japan."

One additional comment could have brought chills to European diplomats. The U.S.-Soviet relationship, Mr. Eagleberger suggested, was "largely irrelevant" to the process of shifting focus from the Atlantic to the Pacific, except in possible security terms:

> [If], in fact, the security relationship and the intimacy of the relationship with Western Europe changes substantially, it inevitably will lead the Soviet Union to look upon the area as one in which opportunities exist for mischief-making.

The Eagleberger statement has since been characterized as an individual reaction to recent difficulties in communicating with Europe. But rather than interpreting the remarks as a personal concern that dictated greater cooperative efforts, some European observers may have seen it an an overt threat of abandonment.

In response to several embassy inquiries, State Department officials assured European capitals that a "shift" was neither in the making nor a goal of American policies. But Mr. Eagleberger repeated his remarks in later forums, and subsequent events fed concern. U.S. congressional debate over funding for American forces in Europe, for one, underscored perceptions of a

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general lack of resolve to maintain North Atlantic Treaty Organization (NATO) security commitments. This attitude, it was claimed, was behind an amendment introduced by Sen. Sam Nunn (D, Ga.) to reduce American troop levels in Europe -- a measure that fell just 14 votes short of passage. Its failure did not reassure the Europeans; their point was that the resolution should never have been introduced.

The Nunn amendment was drafted to attract attention to the overall question of American contributions to European security as well as to fundamental nuts and bolts issues. Sen. Nunn consistently noted in congressional debates that while the United States was pursuing unilateral force improvements within the NATO defense structure, European nations were failing to implement consistent defense spending increases to supplement and support those measures. If Europe was not willing to take the steps necessary to utilize American force improvements, it was implied, why should the United States over-extend and jeopardize itself by commiting forces that could not be supported?

What Sen. Nunn had favored, according to his congressional statements, was a plan to implement U.S. improvements contingent upon Europe's response. As Europe's defense infrastructure was improved, the United States would be willing to commit its share, but not until then. "Unless our allies do their part," Sen. Nunn concluded, "all this money we are spending is not going to change the [military] balance in Europe."

While this argument had great support in Congress, it alarmed our European allies. Many apparently viewed the issue not as one of logistics or philosophy, but as a fundamental question of Washington's commitment to Europe's security. While annual defense spending increases have been agreed upon by NATO countries, many governments have not been able to meet these goals because of difficult domestic economic circumstances. Europe's defenders in Congress insisted that arbitrary standards should not be imposed by the U.S. government that could ultimately upset the alliance. Europe should be given time to improve its domestic economic base and allowed to meet defense goals when it is capable of doing so.

Criticism of Japan during this congressional debate may also have generated suspicions in some European capitals. Observers noted that as Congress was considering specific mandates for increasing defense contributions in Europe, Japan was being urged simply to increase its efforts without mention of particular spending levels. Although explanations exist for this discrepancy, it may have been interpreted as an indication of an American tilt toward Japan.

The straw that broke the proverbial camel's back, however, was the appointment of Michael Armacost to succeed Mr. Eagleberger at State. To Atlantic-directed policymakers, the Armacost appointment was tantamount to placing an "Asian hand" in the Department's number-three position, a clear indication that policymaking in the United States had shifted at the highest levels to a Japanese focus. Armacost's most recent State Department experience, after all, had been as ambassador to the Philippines and deputy assistant secretary of East Asian Affairs. He was also known more for his academic and professional experience in Japan than for his fluency in German and his academic exposure to the continent.

Closer economic ties between the United States and Japan are said to be at the expense of Europe. U.S. trade with Japan is growing more rapidly than with Europe, a trend that is allegedly promoted by officials in both countries. Trade-related policy decisions in Japan, it is claimed, favor the United States over Europe. The growing U.S. trade deficit with Japan, for example, is viewed as a serious political problem and is given top priority in Tokyo, while continuing European deficits with Japan are given secondary importance. Likewise, Japanese policymakers are frank in admitting that the government is more sensitive to the political ramifications of U.S. investments in Japan because of the potential for the trade imbalance to escalate into a damaging bilateral dispute. Some Europeans suggest that these developments, while not necessarily suggesting an active conspiracy to exclude European investment from Japan, have the same effect in practical terms.

American Responses and Perspectives

A series of discussions followed the Eagleberger remarks -- later repeated in a formal address in February -- in which American officials reassured their European counterparts that they had no intention of abandoning the Atlantic alliance. These talks took place at the working level; few discordant notes were sounded by European heads of government. State Department officials reportedly considered three alternatives to deal with the situation, none fully acceptable:

- The State Department could formally declare that Europe remained this country's top foreign policy priority. This might ease fears in Europe, but Asian hands in the department argued that it might create a similar problem in the Pacific and jeopardize recent progress in bringing Asian nations, particularly Japan, into the international arena.

- A "no problem" stance could be assumed, in effect denying the existence of any difficulties. This approach was rejected on the grounds that strong reassurance -- and leadership -- was necessary to prevent damaging the alliance. Insisting that there was no problem could suggest total indifference to Europe.

- An even-handed approach was the third option. This appeared the most sensible in light of Japan's increasing economic and political importance in the world and the historical, cultural and political links shared by the United States and Europe.

To reassure U.S. allies, Deputy Secretary of State Kenneth W. Dam therefore told the American Bar Association in early August that policymaking is not a "zero sum game" in which advancing relations with one region means neglect of another:

> There are, indeed, changes underway in both Europe and Asia -- and in U.S. relations with both -- but our policy is balanced, not tilted in one direction or the other. Yet, Asia is growing in importance in political, security, and especially economic terms; but no, our strengthened relations with Asia need not diminish our traditional ties to Europe. And those ties remain close despite -- or, in some cases, because of -- our differences and debates.

Mr. Dam insisted that American interest in Asia has been a standard for centuries and is not just a recent discovery. He downplayed policy disagreements with Europe, noting instead the "political courage" of European allies in their willingness to deploy Pershing and cruise missiles. His conclusion was intended not only to reassure Europeans by addressing a specific source of concern, but perhaps also to prepare the ground for trilateral relations among the United States, Europe and Japan to replace the current set of bilateral arrangements:

> The United States is a global power with global interests. We do not have the luxury of choosing to care about one region more than another. We should not write off the Atlantic alliance or prescribe cures (like the Nunn amendment's troop reductions) far worse than the ailment. Neither should we ignore the burgeoning of the Asian economies. Rather, the European-U.S.-Asian relationship should be viewed in complementary, not competitive, terms. Europe gains, not loses, from strengthened U.S.-Asian ties. And Asia gains, not loses, from strengthened U.S.-European ties.

To counter concerns over his appointment, Mr. Armacost made a trip to Europe his top priority and returned to Washington in mid-September to report that at the highest levels of government, there were no express concerns over a perceived shift to the Orient. Informed sources noted that the atmosphere surrounding the meetings was "positive and supportive."

Nevertheless, there were indications afterward that fears still existed at the working level. Mr. Armacost took advantage of the opportunity presented by the thirtieth meeting of the Atlantic Treaty Association in Toronto to address the subject yet again. In an October 10 speech entitled "NATO and the Challenges Ahead," the under secretary noted that Europe's security depends as much upon events in Asia and other areas of the globe as on developments across its borders. He reiterated Asia's economic and security importance to the United States and, by extension, to Europe. Without calling for a revised NATO structure, he nevertheless encouraged his European audience to embrace these developments in the context of trilateral relations: "The resilience of our friends in Asia," he concluded, "clearly contributes common interests to warrant a wider framework of cooperation in many spheres."

The Armacost speech, however, was not totally satisfactory to State Department officials. A speech designed by committee, it underwent several drafts by working-level representatives in the East Asian and European bureaus. There were no divisions over the "Asia versus Europe" issue, but at least some people within the department felt the speech did not completely resolve the problem. Officials are said to be interested in utilizing an appropriate forum in the near future to elaborate the points outlined in the speech.

Japan's Perspective

Many Japanese commentators are elated over the coming of the "Century of the Pacific." Jiro Tokuyama, president of the Nomura Management School and a frequent contributor to the press, is representative of those who write of the

Pacific basin's dynamism. He recently analyzed the economic growth of the region, suggesting that the shift to high technology industries supported by traditional values that emphasize diligence and frugality has led to "spectacular" economic growth while the world economy as a whole has stagnated. The most recent edition of the Foreign Ministry's annual white paper assessing Japan's relations with other nations also underscores the growing belief that global politics have entered the "Age of the Pacific," creating unique leadership opportunities and obligations for Japan.

Japanese diplomats, however, are more circumspect and are less likely to endorse a shift in U.S. policies or even to suggest that such a transformation is occurring. For the most part, they view developments as a natural evolution of Japan's place in the international arena. A State Department official notes that Japanese diplomats often set priorities that appear rational to them, but may cause concern with other groups. The United States, for example, is the most important overseas market for Japan and thus warrants special attention to the extent that the magnitude of political problems is greater than those that might exist with Europe.

While Japanese officials may not admit to this perspective, they nevertheless are concerned and in some cases bewildered that Europeans might view changes in U.S.-Japan relations as coming at their expense. While the European continent may or may not have secondary economic importance, it is critical in political and security terms. Just as events in Asia affect Europe's security, European stability affects Japan. Japanese diplomats are just as concerned, for instance, about potential deployments of Soviet missiles and U.S.-European strategies for dealing with these events as European politicians. A failure by either country to consider the Asian dimensions of these and other issues could easily tip the political and security balance in the Far East, it is maintained.

In a certain sense, Japan is a bystander in what is essentially a European problem: a failure of domestic policies and an absence of global vision. It is debatable whether Japan can address European fears about a shift in American policies, although increased and routine communication could help and might be desirable for its own sake. Still, there are limits to the steps Tokyo could take if indeed these concerns exist and are widespread.

European Concern: Justified or Paranoid?

Europe's uneasiness is sometimes difficult to comprehend, leading one observer to write it off as "European paranoia." The core of the problem appears to lie in continued economic difficulties within the Common Market countries and increasing global challenges from the United States, Japan and developing Asian economies.

In spite of decades of prosperity, European unemployment has remained high and economic growth in many countries has declined or, at best, stagnated. Although unemployment rates have fluctuated greatly in the United States over the last 10 years, the economy has been able to continue creating new positions to accommodate at least a portion of the new entrants into the workforce. By one estimate, 15 million jobs were created between 1973 and

1983, while net new job creation in Western Europe over the same time was virtually zero.

In dealing with these problems, European leaders have adopted reactive rather than progressive solutions. Protectionism is high and threatens to increase as Japanese imports make inroads into technogically new fields. Pessimism is not necessarily rampant, but certainly widespread, as Europeans see themselves losing international economic and political ground. Europe's traditional leadership has been reduced in several arenas and is threatened in others as its economic strength levels or declines.

Observers hold European nations accountable for their economic problems. They blame government intervention, restrictive regulatory standards, high labor costs, labor immobility and choking government subsidies for Europe's present condition. Government policies may have made it possible to maintain relatively high standards of living, it is argued, but prosperity has come at the expense of new, dynamic industries. "You couldn't have a Silicon Valley in Europe," one analyst declares. "They'd nationalize it before it got off the ground."

Many government officials, both in the United States and Japan, agree with Mr. Eagleberger's analysis of a European continent that increasingly is moving inward rather than outward. They note that to European diplomats, expanding relations with one country inevitably means degrading relations with another. These philosophical views are so deeply ingrained, they claim, that Europe cannot help interpreting recent developments between the United States and Japan as coming at their expense.

Some observers belittle European anxiety and insist that current U.S.-Japan political and economic trends are natural and desirable, not a comprehensive conspiracy to reduce Europe's importance. If Japan gives priority to American investment, for example, it is simply competing aggressively for international investment capital, not necessarily attempting to enhance the position of one of its trading and political partners over the other.

U.S. officials and observers add that the American focus still retains a strong European bias in several respects. Beyond cultural and historic ties, the American bureaucracy, some would say, is tilted in favor of Europe over Asia. The State Department still devotes more personnel resources to Europe than to Asia, in spite of recent appointments of officials with Asian experience to higher posts. As long as this institutional bias remains, Europe can rest assured that its interests will be preserved in the department's halls. Some Asian specialists might go so far as to suggest that, if anything, more attention should be given to Japan and other nations in the Far East.

The Future

This problem could have serious implications. Should European concerns continue, both the United States and Japan could face increasing difficulties in the form of greater protectionism or less cooperation on security issues. "We should not be placed in a position of explaining Japan to Europe," notes one State Department official, "or vice versa. Relations must stand on their own merits." Indeed, it appears that the best solution would be to foster communication to enhance a three-way relationship, rather than two sets of bilateral relationships. Japanese interests would certainly be better served in the long run through such an arrangement.

One approach might be to institutionalize trilateral questions, much as Japanese-related elements increasingly appear to be a routine consideration in U.S. government decisions. Or, the United States could add annual sessions concerning European interests to its regular consultations with Japan. Some government officials informally have recommended that the State Department "force feed" information concerning its dealings with Japan to European capitals to increase awareness of U.S. actions and their ramifications and pre-empt fears that the United States is acting at Europe's expense with regard to Asian policies. By increasing the flow of information, it is argued, communication also increases, and with communication comes better understanding and improved relations.

The ultimate solution, of course, is a global economic recovery with sufficent trade opportunities for everyone. But barring a miracle, the present course seems destined to continue. The United States is not likely to abandon Europe and Japan will certainly not encourage such a step. However, economic and political currents may sweep America and Japan together, leaving Europe in the background. Foreign policy can in some ways only reflect those currents, not precipitate them.

For further information, contact Michael Chinworth.

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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Defense Costs as Percentage of GNP

	1981	1982	1983
United States	5.8%	6.5%	6.9%
Belgium	3.5	3.4	3.4
Britain	4.9	5.1	5.9
Canada	1.8	2.1	2.1
Denmark	2.5	2.5	n.a.
France	4.2	4.2	4.2
Germany	3.4	3.4	3.4
Greece	7.0	7.0	7.1
Italy	2.5	2.6	2.8
Luxembourg	1.2	1.2	1.3
Netherlands	3.2	3.2	3.3
Norway	2.9	3.0	3.1
Portugal	3.5	3.4	3.4
Turkey	4.9	5.2	4.9

Changes in NATO Country Defense Spending*

	1979	1980	1981	1982	1983
United States	3.4%	4.9%	4.1%	7.6%	7.6%
Belgium	2.2	2.0	0.9	-3.3	-3.0
Britain	3.0	2.8	1.3	6.4	3.0
Canada	-0.9	5.1	3.1	4.9	5.0
Denmark	0.2	0.7	0.4	-0.3	-0.2
France**	2.5	3.7	3.6	0.9	0.9/1.5
Germany	1.8	2.3	3.2	-0.8	1.9
Greece	-2.9	-8.4	22.9	0.1	1.3
Italy	2.6	4.9	-0.5	3.2	1.1
Luxembourg	3.5	16.3	4.8	3.9	3.5
Netherlands	4.2	-1.7	3.3	2.1	2.7
Norway	1.9	1.8	2.7	4.1	2.8
Portugal	2.9	10.1	1.5	0.5	0.4
Turkey	2.6	2.0	1.8	4.6	1.9
NATO Total Excluding United States	2.2	2.6	2.8	2.3	1.9/2.1
NATO Total	3.1	4.0	3.6	5.7	5.6/5.7

*In inflation-adjusted terms. Figures based on NATO definition of defense spending. National fiscal years utilized. Non-U.S. NATO and NATO totals are weighted average growth rates developed using 1981 constant prices and exchange rates.

**France included for comparison purposes. Spending changes are estimates by the U.S. Department of Defense.

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JAPAN · ECONOMIC · INSTITUTE

JEI REPORT

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Nakasone Shuffles Cabinet

Only days after he was assured of two more years as Liberal Democratic Party (LDP) president and prime minister of Japan, Yasuhiro Nakasone reorganized the cabinet, maintaining some key ministers while making new appointments to most positions. The decisions reflect factional considerations, but also indicate a continuation of the basic thrust of policies initiated during the last two years.

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councils. Four officials -- representing the United States, France, Great Britain and West Germany -- will attend sessions of the joint planning subcommittee of the Industrial Structure Council as "non-regular members."

The issue of "transparency" -- the openness of Japanese policymaking -- has been of increasing concern to American businessmen in recent years and advisory council access is seen in the United States as an important symbol of Japan's willingness to allow foreign input (see JEI Report No. 12B, March 23, 1984). It is unclear, however, whether the recent decision is limited to this subcommittee and occasion or if it will become a permanent policy.

Corrections

The number of full-scale banking offices operated by Japanese banks in the United States was misstated in the summary accompanying JEI Report No. 42A, November 2, 1984. There are currently 75 such offices, including 15 commercial bank and Edge Act corporation subsidiaries, 32 branches and 28 agencies. The size of the network rises to 107 if the banks' 32 representative offices are included, but these offices cannot engage in banking activities.

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JAPAN · ECONOMIC · INSTITUTE

JEI
REPORT

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Post-Election Trade Politicking Begins . . .

Trade officials in the United States and Japan are preparing for a post-election push on outstanding issues, both to wrap up various negotiations and to head off anticipated frictions resulting from a big trade surplus in Japan's favor. Initial interest is focused on an interagency report from Secretary of State George Shultz to Senate Foreign Relations Committee chairman Charles Percy (R, Ill.) assessing the status of Japan's recent market-opening measures. The study -- dubbed the Percy Report in honor of the recently defeated senator -- concludes that progress has been made in a number of areas, but argues that significant barriers continue to thwart sales of U.S. goods to Japan.

light of bilateral discussions over software and microchip copyright protection, an area of significant concern in the United States and one that could become contentious in the months ahead.

Objections were also raised by Japanese officials about recent incidents where the Department of Defense (DOD) blocked or allegedly intervened in the acquisition of American firms by Japanese corporations because the companies do work that, according to DOD, is essential to national security. Access to this technology through takeovers, the Pentagon's actions imply, endangers American interests, even if the potential purchaser is an American ally (see JEI Report 40B, October 19, 1984).

The DOD position, some observers say, is a threat to increased Japanese investment in the United States and could upset potential technology transfers between American and Japanese companies. Should DOD continue policies that are interpreted by overseas concerns as hostile, it is argued, international companies will abandon attempts to expand their American market presence through direct investment. It could also cast doubts upon the sincerity of American requests for bilateral cooperation in technology exchanges across a number of fields. U.S. officials reportedly promised to look into these concerns.

Michael Chinworth

Bilateral Trade Deficit Headed for $36 Billion Level

Projections of the overall 1984 U.S. merchandise trade deficit are being revised upward almost in step with the release of the latest batch of monthly data. At the start of the year, the Commerce Department was forecasting that the red-ink trade entry would move up from a record-shattering $57.5 billion in 1983 to the $100 billion range (exports f.a.s., imports Customs value). By mid-year, Reagan administration trade policymakers would have happily settled for an imbalance of this once-unimaginable magnitude since the deficit by then had topped $51 billion. Now they are hoping that imports will exceed exports by no more than $115 billion. This, however, could easily prove to be wishful thinking. With the biggest import quarter of the year still to come, the aggregate U.S. trade deficit already adds up to a whopping $84.6 billion.

Japan's role in the nonstop erosion of the U.S. trade account ' continues to fly in the face of conventional wisdom. The bilateral red-ink entry did balloon to $25.9 billion in the first nine months of 1984 -- from $13.6 billion in the year-earlier period (see accompanying tables) -- but this surge represented only one-fourth-plus of the deterioration in the overall trade deficit. The main hemorrhage occurred in U.S. trade with developing countries, where 1983's nine-month deficit of $19.5 billion was replaced this year by a $36.1 billion imbalance. Worsening trade results with Canada and the European Community were also a key cause of the increased red ink on the U.S. trade books. Trade with this country's European partners was out of kilter by $8.6 billion through September -- a significant turnaround from last year's $0.7 billion surplus, while the imbalance with Canada slid $4.4 billion to $14.3 billion.

U.S. Exports to Japan

(in millions of dollars, f.a.s. value basis)

	January-September 1983	January-September 1984	Percent Change
Total Exports	$15,709.4	$17,416.8	10.9%
Industrial Supplies	6,267.3	6,718.7	7.2
Bituminous Coal	758.3	699.0	-7.8
Petroleum Products	467.7	496.8	6.2
Natural Gas	208.4	196.9	-5.5
Nuclear Fuels	149.5	129.1	-13.6
Logs and Lumber	684.4	651.1	-4.9
Paper Base Stocks	346.9	401.3	15.7
Paper and Paper Products	216.2	222.6	3.0
Organic Chemicals	477.4	534.3	11.9
Inorganic Chemicals	461.5	620.3	34.4
Plastics and Synthetic Resin Compounds	232.7	267.9	15.1
Fertilizers and Insecticides	198.8	210.8	6.0
Steel Scrap	158.0	198.0	25.3
Nonferrous Ores and Scrap	229.4	257.1	12.1
Nonferrous Metals	313.4	299.1	-4.6
Textiles	73.7	86.3	17.1
Raw Cotton	362.7	453.2	25.0
Hides and Skins	170.6	243.0	42.4
Leaf Tobacco	69.5	42.9	-38.3
Food and Feed	4,067.9	4,577.8	12.5
Corn	1,232.2	1,553.6	26.1
Sorghum	50.6	163.4	222.9
Soybeans	851.5	899.2	5.6
Wheat	434.7	402.0	-7.5
Fruits and Vegetables	326.8	349.3	6.9
Meat and Meat Products	427.8	430.4	0.6
Fish and Fish Products	465.5	450.0	-3.3
Capital Goods	3,520.2	4,064.1	15.5
Nonelectric Machinery	2,089.8	2,520.5	20.6
Data Processing Equipment	649.5	825.8	27.1
Measuring, Testing and Control Instruments	294.8	325.6	10.4
Laboratory Testing and Control Instruments	67.3	70.1	4.2
Scientific, Professional and Medical Equipment	166.6	186.0	11.6
Power Generating Equipment (excl. aircraft and automotive engines)	123.7	230.9	86.7
Oil and Gas Field Equipment	70.7	52.0	-26.4
Metalworking Equipment	73.0	77.2	5.8
Service Industry Equipment	84.5	70.1	0.4
Electric Machinery	492.3	656.3	33.3
Generators and Transformers	48.8	70.0	43.3
Broadcast and Communications Equipment	220.4	324.3	47.1
Telephonic and Other Electric Equipment	223.1	262.0	17.4

Transportation Equipment	938.1	887.3	-5.4
Civilian Aircraft	489.8	304.9	-37.8
Civilian Aircraft Engines and Parts	273.5	341.5	24.9
Automotive Parts	100.7	132.8	31.9
Consumer Goods	1,050.2	1,114.8	6.2
Pharmaceuticals	413.7	424.4	2.6
Toys and Sporting Goods	89.1	69.1	-22.4
Cigarettes	57.4	74.6	30.0

U.S. Imports from Japan

(in millions of dollars, Customs value basis)

	January-September 1983	January-September 1984	Percent Change
Total Imports	$29,279.8	$43,321.8	48.0%
Capital Goods	8,408.2	14,577.1	73.4
Nonelectric Machinery	5,601.8	9,782.0	74.6
Business Machines	2,627.9	4,874.5	85.5
Metalworking Machinery	463.4	691.3	49.2
Agricultural Machinery	155.5	273.8	76.1
Specialized Industrial Machinery	498.9	1,095.2	119.5
Scientific, Professional and Medical Equipment	221.8	353.4	59.3
Electric Machinery	2,638.5	4,529.6	71.7
Transportation Equipment	167.9	265.6	58.2
Automotive Products	10,697.0	14,114.6	31.9
Passenger Cars	7,817.3	9,465.6	21.1
Assembled Trucks	1,438.4	2,176.7	51.3
Automotive Parts	1,428.9	2,424.2	69.7
Consumer Goods	5,809.4	8,466.1	45.7
Video and Audio Recorders and Players and Stereo Equipment	1,534.1	2,792.0	82.0
Television Sets	279.9	523.4	87.0
Radio Receivers	174.8	226.7	29.7
Tableware and Glassware	249.5	311.4	24.8
Metal Cookware and Cutlery	268.4	299.4	11.5
Photographic and Optical Goods	591.2	775.6	31.2
Clocks and Watches	252.1	317.5	25.9
Toys and Sporting Goods	208.4	299.7	43.8
Motorcycles and Parts	576.9	520.2	-9.8
Clothing	247.3	385.7	56.0
Intermediate Goods	3,868.5	5,542.5	43.3
Steel Mill Products	1,319.3	2,353.7	78.4
Nonferrous Metals	297.6	397.1	33.4
Organic Chemicals	322.1	401.4	24.6
Tires and Tubes	288.7	392.8	36.1
Textiles	411.1	522.0	27.0

Unfortunately for bilateral relations, the real part played by Japan in this year's runaway U.S. trade deficit is moving closer to the commonly accepted view. While American sales to the rest of the world picked up additional steam in each of 1984's first three quarters, the pace of exports to Japan first slowed from 18.5 percent in the January-March period to 12.5 percent in the following three months and then flagged again to just 2.9 percent in the July-September quarter. Conversely, the growth of U.S. imports from countries other than Japan gradually moderated over the course of the January-September 1984 period, but purchases of Japanese-made products continually gained momemtum, posting a gain of 60.2 percent in the third quarter after starting off the year with a 40 percent jump.

The net result of these two trends is inescapable: the bilateral trade deficit could easily hit $36 billion by the end of the year. Perhaps surprisingly, the exchange rate is playing only a bit role in this unfolding scenario, at least on paper, since through September, the yen actually averaged 1.7 percent more than in the first nine months of 1983. The real culprit is the strength of the U.S. economic expansion. Even allowing for a continuation of the third quarter's slowdown in the October-December period, growth will be considerably more robust than trade forecasters anticipated at the start of 1984 and this will show up on the bottom line of the U.S. trade account.

Susan MacKnight

Washington Ups Ante in Fight Against Mixed Export Credits

U.S. policymakers have finally decided to fight fire with fire in assisting U.S. companies to obtain third-country export contracts. Late last month, the Export-Import Bank of the United States and the Agency for International Development (AID) offered their first mixed foreign aid and commercial export credit deal in support of a multi-million dollar sale of locomotives to Botswana. Although the mixed credit package will not be finalized until either General Electric Co. or General Motors Corp., the domestic bidders, wins the contract, AID is expected to put up about 20 percent of the financing with Eximbank supplying the rest in the form of a loan. Pointing to the mixed credit financing offered by the Canadian government to Bombardier Ltd., one of that country's largest locomotive manufacturers, U.S. companies have repeatedly stressed that comparable financing terms are imperative if they are to land the Botswana contract. This is the first time Washington has offered a mixed credit package since Congress directed the Eximbank to pursue a more aggressive policy toward this financing arrangement over a year ago.

Mixed credits combine grants or soft loans with official export financing. The use of aid monies stretches the country's export financing funds since the Eximbank-supplied funds must be offered at internationally agreed-upon interest rates. Heretofore, Washington has vehemently opposed this financing practice, labeling it "predatory" and unfair, and even waged an unsuccessful campaign to limit its use in the Organization for Economic Cooperation and Development (OECD)-sponsored Arrangement on Guidelines for Officially Supplied Export Credits. Responding to business complaints of lost sales due to foreign mixed credits, however, Congress, in authorizing funds for

STATISTICAL SUPPLEMENT

Trade and Payments Data
(in millions of dollars unless otherwise indicated)

	1982	1983	January-September 1983	January-September 1984	July 1984	August 1984	September 1984
Japan's Balance of Payments							
Trade Balance	$ 18,079	$ 31,454	$22,577	$30,950*	$ 4,124*	$ 2,221*	$ 5,220*
Exports (f.o.b.)	137,663	145,468	105,618	124,113*	14,837*	13,178*	14,484*
Imports (f.o.b.)	119,584	114,014	83,041	93,163*	10,713*	10,957*	9,264*
Current Account Balance	6,850	20,799	14,560	23,577*	3,210*	1,231*	4,348*
Long-Term Capital (net)	-14,969	-17,700	-12,125	-32,641*	-7,146*	-3,183*	-2,189*
Overall Balance	-4,971	5,177	3,234	-11,655	-2,665	-3,435	2,777
International Reserves (end of period)	23,262	24,496	24,641	25,444	25,123	25,428	25,444
Japan's Customs Clearance Trade							
Trade Balance	6,900	20,534	14,367	22,328*	3,199	1,113	4,492*
Exports (f.o.b.)	138,831	146,928	106,461	125,269*	14,807	13,314	14,628*
Cars	18,015	19,535	14,404	16,432*	2,080	1,564	1,855*
Steel	15,645	12,843	9,322	10,086*	1,262	1,120	1,208*
Imports (c.i.f.)	131,931	126,393	92,093	102,942*	11,608	12,201	10,136*
Crude Oil	46,274	40,063	29,168	29,903*	3,202	3,701	2,650*
Japan-U.S. Trade							
Trade Balance	12,151	18,181	12,017	23,529*	3,253	2,438	3,514*
Exports (f.o.b.)	36,330	42,829	30,102	43,712*	5,566	4,848	5,342*
Imports (c.i.f.)	24,179	24,648	18,084	20,183*	2,313	2,410	2,028*
Yen-Dollar Exchange Rate							
Tokyo Spot Market (end of period)	Y235.00	Y232.20	---	---	Y245.50	Y241.30	Y245.50
U.S.-Japan Trade							
Trade Balance	-16,778	-19,289	-13,570	-25,905	-4,101	-3,179	-3,172
Exports (f.a.s.)	20,966	21,894	15,709	17,417	2,158	1,906	1,768
Industrial Supplies	9,173	8,734	6,267	6,719	821	731	689
Food and Feed	4,971	5,555	4,068	4,578	594	534	468
Capital Goods	4,434	5,116	3,520	4,064	487	418	385
Consumer Goods	1,356	1,394	1,050	1,115	135	129	130
Imports (Customs)	37,744	41,183	29,280	43,322	6,259	5,085	4,940
Automotive Products	12,890	14,919	10,697	14,115	2,021	1,604	1,471
Industrial Supplies	6,795	5,391	3,869	5,543	762	625	624
Consumer Goods	7,842	8,296	5,809	8,466	1,220	1,055	1,006
Capital Goods	9,530	11,896	8,408	14,577	2,170	1,734	1,773

*Preliminary

STATISTICAL SUPPLEMENT

Japanese Economic Indicators

(percentage change from year-earlier period unless otherwise indicated)

	1982	1983	January-August 1983	January-August 1984	June 1984	July 1984	August 1984
Discount Rate (end of period)	5.5%	5.0%	5.5%	5.0%	5.0%	5.0%	5.0%
Outstanding Money Supply	9.2%	7.4%	7.4%	7.8%	7.5%	7.7%	7.7%
Industrial Production	0.3%	3.6%	1.2%	11.6%	12.6%	12.8%	11.0%
Manufacturing Operating Rate	-2.9%	1.6%	-0.7%	9.6%	10.1%	9.6%	8.8%
Number of Bankruptcies	-2.8%	11.9%	8.7%	14.3%	-0.9%	14.3%	4.7%
Residential Construction Starts	-0.5%	-0.8%	-1.2%	4.4%*	-0.7%	6.3%	4.3%*
Job Openings to Applications (ratio)	0.61	0.60	0.59	0.64	0.64	0.64	0.64
Nominal Wages	4.5%	3.5%	3.8%	4.4%*	5.5%	4.1%	3.3%*
Labor Productivity	1.0%	4.6%	1.3%**	10.6%**	11.3%	n.a.	n.a.
Wholesale Prices	1.8%	-2.2%	-1.7%	-0.6%	-0.4%	0.0%	0.2%
Consumer Prices	2.7%	1.9%	2.0%	2.2%	1.9%	2.6%	1.9%
Yen-Based Export Prices	3.9%	-6.0%	-5.8%	-0.3%	-0.2%	1.7%	1.1%
Yen-Based Import Prices	7.9%	-7.8%	-5.4%	-4.6%	-3.0%	-2.1%	-3.5%

*Preliminary

**Through June of each year only.

For Japan's most recent GNP figures, see JEI Report No. 38B, October 5, 1984.

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REPORT

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THE CORPORATE TAX DEBATE IN JAPAN AND THE UNITED STATES

Summary

Corporations play a major role in the American and Japanese economies in terms of output, employment, technological innovation and fiscal policy. As leaders of the business community, corporations have amassed political influence commensurate with their economic stature. In response, other groups have banded together to present alternate opinions. It is no wonder, then, that when the government debates corporate tax policy, a slugfest is almost certain to develop.

With the goal of sustaining economic growth uppermost in the minds of policymakers and populace, the debate over the appropriate level of corporate taxation has been joined on both sides of the Pacific. This report will attempt to throw some light on the developing debates in both countries by looking at corporate tax rates as well as current and future tax policy.

Siblings: The U.S. and Japanese Tax Systems

The fact that the Japanese tax system mirrors that of the United States should come as no surprise; the Japanese system was erected by U.S. occupiers after World War II. Japanese planners copied from the U.S. system a reliance on direct taxes (personal and corporate taxes) rather than indirect taxes like sales taxes, and similarly adopted specific provisions to encourage desirable taxpayer behavior, including incentives for saving and investment.

Despite an overall congruence, the two tax systems differ in several significant respects. Japanese policy exhibits a more coordinated and comprehensive approach to macroeconomic management, and tax policy plays a key role in this respect. In sharp contrast to the United States, it is unusual to find conflicting tax regulations in Japan's tax codes, and the array of incentives and credits forms a tight-knit blanket with few loopholes. In the United States, the amalgam of credits, surcharges, incentives and penalties presents a labyrinth to taxpayers and tax auditors alike. While complexity in and of itself is not necessarily detrimental, the lack of a clear policy direction is.

The lack of direction due to the intricacy of the U.S. tax codes is compounded by its neutral approach to deductions. Interest paid on debts is deductible whether that debt was incurred by investment in productive capacity or by frivolous consumption. The Japanese system, on the other hand, is biased toward rewarding economically constructive activities. Clear signals are sent to both industry and individuals that saving and productive investment will be favorably treated.

Japanese tax planners favor short-term measures over the multi-year provisions employed by Americans. Japanese tax reforms generally have a lifespan of one fiscal year, although it is not unusual for particular measures to be renewed annually. U.S. regulations are generally effective for several years, after which they come up for review. Both methods have advantages and disadvantages. Japanese tax planners can fine-tune policies on an annual basis, correcting errors or responding to developments in a relatively timely fashion. The U.S. system reduces taxpayer uncertainty, possibly encouraging long-term investment but certainly simplifying planning. Some argue that since planners are not omniscient, yearly tinkering with tax laws can be counterproductive. If there are glaring deficiencies, however, alterations can be effected. Proponents of the Japanese system counter that annual revisions prevent inappropriate measures from becoming entrenched and provide more flexibility.

The Role of Corporate Taxes

Another key difference between the two systems is the fact that Japan relies more heavily on corporate taxes for revenue while the United States emphasizes personal taxes in assembling its budget (see Table 1). In fiscal 1984, Tokyo estimates that 30.2 percent of tax receipts will come from corporate pockets and 38.4 percent from individuals. Compare this with figures of 10.8 percent and 44 percent, respectively, for the United States. The share of corporate taxes in total tax revenues has held relatively steady in Japan since the 1960s at around 30 percent, but has declined steadily in the United States, falling from one-fifth two decades ago to one-tenth in recent years.

In terms of absolute amounts, however, U.S. companies are still paying more than their Japanese counterparts. In FY 1983, Japanese corporations paid $39.6 billion and American businesses $54.3 billion. In terms of trendlines, Japan's absolute corporate tax payments have consistently climbed, while the

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United States' rose until 1979 and have dropped since then. This decline can be attributed to two factors: the deep 1981-82 recession and the Reagan administration's tax reforms. As an indication of Tokyo's attitude toward corporate taxes, it is revealing that revenues continued to grow from this source even during the recent recession.

At the local level, the dichotomy is also sharp. Prefectural and other local taxes averaged approximately one-half of total national corporate taxes in Japan from 1960 to 1981. In contrast, state and local corporate taxes only reached one-fifth-plus of U.S. federal corporate tax revenues in 1980, although they have been growing steadily since 1960 (see Table 2). In monetary terms, local corporate taxes weigh more heavily on businesses in Japan than in the United States. Before 1970, U.S. companies paid more state and local taxes than Japanese firms did ($1.2 billion versus $0.7 billion in 1960, for example). Local Japanese tax collectors had closed the gap by 1970, when Japanese and American corporations alike paid $3.7 billion, and have since topped the United States, with total receipts of $22.8 billion in 1981 compared with $14.1 billion for this country.

In both countries, however, corporations are allowed to deduct from national taxes some portion of local taxes. Japanese firms can deduct the local enterprise tax, which accounts for about half of local taxes, and U.S. companies can charge many state and local taxes against federal returns. This eliminates most double taxation, but it makes calculation of total tax burdens more complex.

The Corporate Tax Burden

How heavily taxes impinge on corporate performance is the starting point for any discussion of corporate tax policy in the United States and Japan. Unfortunately, unambiguous data on the subject are not readily available. Figures contained in tax returns and annual reports usually diverge due to different accounting and reporting requirements as well as time period mismatches. Besides this data collection problem, many variables influence tax payments; for one, different lines of businesses face different economic and competitive situations. For these and other reasons, it is extremely difficult to compare levels of effective taxation in the two countries. Nonetheless, it is possible to develop some descriptive statistics from government publications.

Table 3 shows sales and national taxes of U.S. and Japanese corporations by capital size for fiscal years 1981 and 1982, respectively. At the outset, some definitional differences should be pointed out. Most important is that total receipts are shown for the United States, while only total sales are listed in Japan's case. Total receipts include total sales as well as income from other sources. Total taxes are taxes before credits are taken; actual taxes will tend to be smaller (significantly smaller in some cases).

A glance at taxes as a percentage of sales indicates that American corporations average 1.46 percent, significantly higher than the 1.13 percent average for Japanese companies. U.S. rates seem to be more progressive, an important fact from a policy standpoint, given the increased number of corporations in the upper assets brackets. The lowest Japanese rate is clearly higher than the lowest U.S. rate, yet the highest Japanese rate is much lower than its U.S. equivalent. Such a divergence would seem to suggest that Tokyo favors the few giant corporations over the multitude of smaller ones. This is further borne out by figures showing that the biggest firms in Japan pay only about one-third of total corporate taxes, compared with a 60 percent-plus contribution by the largest U.S. corporations.

A better indication of relative tax burdens is given in Tables 4 and 5, which list taxable income and net taxes by capital size and by industry for both countries. One caveat should be made clear: while the data for taxable income and net taxes should be equivalent for the two countries, Japanese sources are not comprehensive in their definitions of what is and is not included in these two categories. With this in mind, the tables indicate that U.S. corporations fare better than their Japanese competitors.

The average tax rate for Japanese firms (33.9 percent) is two-fifths higher than the average U.S. levy (24.2 percent). Both tax codes seem to impose progressive rates when firms are categorized by size (Table 4), but again the U.S. spread is much wider than Japan's. This progressivity lapses, however, at the highest bracket in both countries, where there is a 7.2 percentage point drop in the Japanese rate and a 13.3 percentage point drop in the U.S. rate. According to this measurement, the biggest Japanese corporations again contribute less to total corporate tax revenues than their U.S. counterparts -- $7.4 billion versus $29.5 billion, or 24 percent of the total compared with 50 percent in the United States.

As shown in Table 5, there is a high degree of uniformity in Japanese tax rates by industry in comparison to this country's. The notable Japanese exception to this homogeneity -- the mining sector, with a 7.6 percent tax rate -- is also favored in the United States, where the rate is 17.8 percent. Interestingly, many U.S. industries that have often been at the center of bilateral trade frictions also receive more favorable treatment than their Japanese competitors, including the steel industry (28.5 percent versus 35.1 percent) and machinery makers (23.8 percent compared to 35.1 percent).

The Corporate Tax Debate: Who's Paying How Much?

The Japanese business community lit a fire under the corporate tax debate when Keidanren, the largest business association, released a report on tax rates earlier this year claiming that Japanese companies faced a real tax burden of 50.50 percent in 1983, far above what it said was levied on American (a projected 32.28 percent in 1985), West German (an estimated 49.84 percent in 1984), French (45.70 percent in 1980) or British (18.06 percent in 1982) corporations. Already having paid for a cut in individual income tax rates in FY 1984, Japanese business leaders warned that the government was risking an economic slowdown if corporate taxes were raised further.

The Japanese government was not fazed by this assault, arguing that Keidanren did not take into account variations in U.S. state and local taxes and that in important industries such as computers and electronics Japanese taxes are no worse than those of other industrialized countries. Pointing to strong upward trends in business investment and research and development outlays, government officials downplayed any negative effects arising from tax policy.

Some analyses of Japanese tax rates have appeared in U.S. publications, adding to the confusion. The U.S. General Accounting Office quotes an effective tax rate of between 45.6 percent and 57.7 percent for Japanese corporations (see JEI Report No. 37B, September 28, 1984). Other scholars have hinted that Japanese tax burdens are unusually low, while refraining from giving explicit figures.

Spurred by efforts to whittle down the monstrous federal budget deficit, a debate also rages in the United States. Several studies of U.S. effective tax rates are publicly available. The Internal Revenue Service publishes enough data to derive the partial picture given in this report, while Congress' Joint Committee on Taxation publishes an annual survey of effective tax rates by industry. According to 1982 tax return data analyzed by the joint committee, U.S. corporations were hit with tax rates ranging from minus 17.7 percent (the chemical industry) to 39 percent (the rubber industry). The same report also indicates that average U.S. tax rates are much lower than average tax rates imposed by foreign countries on U.S. corporate income generated abroad -- 16.1 percent versus 55 percent. The study covered just 213 companies, possibly skewing the results for some industries.

Citizens for Tax Justice, a consumer-oriented group, recently released a study examining the annual reports of 250 American corporations from 1981 to 1983. The paper asserts that these companies paid an effective tax rate of just 14.1 percent over the three years, including 14.6 percent in 1983. Perhaps more startling is the claim that 128 of the companies surveyed paid no federal income taxes despite earning $57.1 billion during the sample period. At the other extreme, only 12 companies paid taxes equivalent to a 40 percent or greater rate. Critics of the report fault the exclusion of deferred taxes from the calculations, as well as the use of annual reports for a data source, both of which tend to reduce taxes.

Clearly, there are large differences of opinion on this subject in both countries -- differences that are unlikely to narrow. What can be easily grasped are the many tax incentives and breaks that Japanese and U.S. corporations use to modify their tax burden. These measures are important not only to the companies, but to the entire economy since they alter investment and purchasing decisions that ultimately impact on economic growth.

Computing Corporate Taxes

The following examination of how corporate taxes are computed will, of necessity, be brief -- the ins and outs of the tax codes are truly mind-numbing. More attention will be paid to particular aspects of the process, including depreciation and incentives for investment and research and development.

Owing to the heavy U.S. influence, the general procedures for computing taxes in both countries are quite similar: taxable income is derived from gross income; tax liability is then computed and adjusted for credits and incentives. The Japanese system is actually much simpler, except for the fact that net income is divided into distributed and undistributed profits. The following table outlines the two treatments.

Japanese Statutory Corporate Tax Rates, FY 1984

(in yen)

Corporations with Paid-in Capital of	Rate on Distributed Income	Rate on Undistributed Income
Over 100 million	33.3%	43.3%
100 Million or less		
First 8 million of annual income	25.0	31.0
Remainder of taxable income	33.3	43.3

Source: Japan, Ministry of Finance, An Outline of Japanese Taxes, 1984.

The Internal Revenue Service publishes this tax schedule for U.S. corporations:

U.S. Statutory Corporate Tax Rates, 1983

(in dollars)

If taxable income is between:	the tax is:	of the amount over:
0 - 25,000	15%	0
25,000 - 50,000	3,750 + 18%	25,000
50,000 - 75,000	8,250 + 30%	50,000
75,000 - 100,000	15,750 + 40%	75,000
100,000 or more	25,750 + 40%	100,000

Source: U.S. Internal Revenue Service, Tax Information on Corporations, 1983.

In terms of statutory rates, the United States and Japan are quite similar. It is the adjustments to the statutory taxes that lie at the heart of the debate on tax policy.

Depreciation: Special Measures vs. ACRS

Both governments allow corporations to use any of the generally accepted methods of accounting for depreciation: straight-line and declining balance in Japan and these plus several others in the United States. The treatment of accelerated depreciation differs significantly, however, and it appears that the Accelerated Cost Recovery System (ACRS) instituted by the Reagan administration offers some advantages.

Japan's Special Measures for Depreciation - In addition to taking a depreciation allowance calculated according to the straight-line or declining balance approach, one of two methods can be used to compute additional depreciation under certain circumstances in Japan. Increased initial depreciation can be taken on certain purchases for the first year of use in an amount equivalent to a percentage of the acquisition price according to the following schedule:

Initial Japanese Depreciation Allowances

Available for:	Percentage
Qualified high technology equipment for businesses in Technopolis development regions	30%
Amortization of forestation costs	27
Pollution control equipment	25
Facilities acquired by associations that accumulate reserves for either structural improvements of small businesses; promotion of small businesses as subcontractors; or promotion of traditional crafts	23
Non-polluting equipment; water supply equipment; certain assets used for adjustments in basic materials industries; energy-saving equipment; earthquake equipment; medical equipment with a price over Y1.4 million; equipment acquired under the Law on Extraordinary Measures for Small and Medium Enterprises located together in Specific Areas	18
Equipment to recycle resources	16
Steel vessels	15
Equipment purchased by small businesses with a price over Y1.4 million	14
Aircraft	11
Buildings used for retail shops	8
Special treatment for equipment costing over Y15 million for:	
a) underdeveloped areas or industrial development areas	16
b) coal mining regions, depopulated areas or depressed local industrial areas	18
c) Okinawa free-trade zone	50
Special amortization of research and development costs paid to specified associations, including a write-off of the full amount in the year of payment	variable

Accelerated depreciation for the first five years of use is offered in six cases:

Accelerated Japanese Depreciation Allowances

Available for:	Percentage
Machinery used by commercial and industrial cooperatives and manufacturers like textile makers that implement rationalization plans or structural improvements	30%
Machinery, equipment or buildings owned by a corporation where 25 percent of the employees are handicapped	18
Newly built rental housing	47
Housing built under the Law Concerning Redevelopment of Metropolitan Areas	14
Crude oil or liquefied petroleum gas storage facilities	34
Storage facilities, including warehouses and grain silos	27

Fixed assets have fixed useful lives that Japanese companies can only alter under specific circumstances. Some examples are: concrete office buildings, 65 years; trucks, 4 years; computers, 6 years; iron and steel plants, 14 years; machine tool plants, 10 years; and automobile plants, 10 years.

The ACRS of the United States - The Accelerated Cost Recovery System enacted in 1981 is based on the principle that the cost of purchasing particular goods should be recouped in less time than the equipment's useful life. In exchange for this long-sought alteration in depreciation, many exceptions and elections were eliminated. All goods are considered 3-, 5-, 10- or 15-year property and are depreciated accordingly.

U.S. Accelerated Cost Recovery Schedules, FY 1983

Category	Year	Percentage
3-year property	1	25%
	2	38
	3	37
5-year property	1	15
	2	22
	3-5	21
10-year property	1	8
	2	14
	3	12
	4-6	10
	7-10	9
15-year property*	1	12
	2	10
	3	9
	4	8
	5	7
	6-9	6
	10-15	5

*Varies somewhat according to which month the item was purchased.

Source: Commerce Clearing House, Inc., 1983 Depreciation Guide.

Concurrent with the introduction of ACRS, the lifetime guidelines for assets were amended. Most equipment concerned with high technology industries, including electronics, telecommunications and research and development, were dropped into the 3- or 5-year property classes, a significant reduction in some cases. Other assets, such as storage and production facilities and infrastructure, also benefited from the new guidelines.

ACRS proved to be such a success that it was scaled back in 1982. The combination of shorter lives and higher depreciation rates proved irresistible even to an economy mired in the deepest recession since the Great Depression.

The problem with ACRS is that it is too broad; many types of investments are treated equally. It does appear to have stimulated strong investment by U.S. corporations. Just how much is unclear. In any case, Japanese business leaders are impressed by the U.S. system and are lobbying for something similar.

Other Income Tax Adjustments

Both governments provide incentives for a host of other activities deemed to be in the national interest, including national defense, pollution control, energy conservation and various social goals. These incentives and credits can accumulate to high levels in particular cases and therefore merit some discussion.

Research and Development Incentives - Since 1981, U.S. companies have benefited from a tax credit for incremental R&D outlays. Twenty-five percent of R&D expenditures above a three-year moving average base can be credited against income taxes up to the total tax, after taking into account other adjustments. This treatment compares favorably with Japanese provisions that allow corporations to deduct 20 percent of R&D expenses over and above the highest level of expenditure since 1966; however, the credit can total no more than 10 percent of the corporation's tax liability.

Overseas Business - There is not much difference of opinion between Japanese and American tax planners that export activities should be granted favorable tax treatment. The methods selected to achieve this objective are quite different, however. Both systems allow corporations to deduct foreign tax expenses from domestic taxes. In addition, Japan offers a much broader range of incentives and credits. The tax code encourages the building of reserves against overseas losses; it rewards technical services transactions; it promotes overseas prospecting for mineral resources; and it encourages small businesses to enter overseas markets.

The United States, on the other hand, offered little in the way of export incentives until the adoption of the Domestic International Sales Corporation (DISC) in 1971. The DISC provision soon ran afoul of European protests and has been replaced by the Foreign Sales Corporation (FSC) framework. Both of these structures provided some tax benefits to corporations that conduct significant overseas business (see JEI Reports No. 18B, May 4, 1984, and No. 27B, July 13, 1984).

Energy Credits - Conservation and adoption of energy-efficient equipment is targeted for favorable treatment by both governments. Japan provides general credits for energy-efficient equipment or the development of new energy technologies. The United States provides more specific credits, such as shale oil development or alcohol fuel use.

Credits for Social Goals - This category includes a broad range of items including pollution control, development of depressed areas and employment of handicapped workers. The variety of credits and incentives is too great to detail in this report; suffice it to say that both governments liberally amend the tax system to promote these objectives.

The Costs

As one might guess, all these credits and incentives add up to a pretty penny in terms of foregone revenue. The estimated costs of major Japanese tax measures are listed in Table 6 and the corresponding U.S. data is given in Table 7. It must be stressed that the figures are only rough estimates, particularly in the case of the United States. The U.S. figures are all likely to be overestimates because they are derived by changing single provisions, whereas in reality several changes are usually instituted at the same time. The data are most useful as an indication of the general magnitude of tax breaks in each country. It is clear that Washington is much more generous than Tokyo when it comes to taking care of business.

Beyond 1984

Faced with ballooning deficits, tax planners in both countries are beginning to take back some gifts and are moving to crack down on certain abuses (see Table 8). American corporations have clearly lost more from recent reforms than the Japanese, but one could argue that the Americans had more to give up. The question of how much to tax business still remains, and parties on all sides are gearing up for a pitched battle as federal budgets are prepared. In the scramble to reduce the red ink, corporations in both countries may get overrun.

In one sense, the debates in both countries are exact opposites. The Japanese are discussing lowering corporate taxes, while the Americans are talking about raising them. In another sense they are similar, with both debates focusing on the appropriate role of corporations in the economy and the tax structure. Free-market philosophies in the United States are running up against the hard reality of a deficit that will not be erased by growth alone. Austerity policies in Japan are putting severe pressures on policymakers to find new sources of revenue while stimulating the economy. The debate over corporate taxation plays a key role in these circumstances and will undoubtedly be amply analyzed.

For further information, contact Jon Choy.

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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Table 1: Corporate Tax and Total Federal Revenues

	Japan			United States		
	(in billions of yen)			(in billions of dollars)		
Fiscal Years	Total Tax Revenues	Corporate Tax Revenues	Share of Total Tax Revenues	Total Tax Revenues	Corporate Tax Revenues	Share of Total Tax Revenues
1950	Y570.8	Y83.8	14.7%	$36.5	$10.4	28.6%
1955	936.9	192.1	20.5	60.4	17.9	29.6
1960	1,801.5	573.4	31.8	94.8	22.3	23.5
1961	2,227.7	714.3	32.1	95.0	20.0	21.1
1962	2,390.7	780.4	32.6	104.0	22.7	21.8
1963	2,731.7	862.9	31.6	110.0	23.3	21.2
1964	3,159.2	975.4	30.9	115.6	25.7	22.2
1965	3,279.7	927.1	28.3	120.0	27.1	22.6
1966	3,663.0	1,031.7	28.2	132.7	30.8	23.2
1967	4,396.8	1,308.0	29.7	146.0	30.3	20.7
1968	5,323.8	1,591.9	29.9	159.9	33.1	20.7
1969	6,455.4	2,008.7	31.1	189.8	36.8	19.4
1970	7,775.4	2,567.2	33.0	194.8	32.9	16.9
1971	8,443.9	2,556.5	30.3	192.4	31.9	16.6
1972	10,400.6	2,992.2	28.8	213.4	34.2	16.0
1973	14,047.8	4,518.0	32.2	240.7	41.2	17.1
1974	15,754.4	5,816.1	36.9	271.6	43.4	16.0
1975	14,506.8	4,127.9	28.5	283.4	41.8	14.7
1976	16,806.3	4,792.0	28.5	314.9	52.5	16.7
1977	18,441.5	5,566.2	30.2	365.9	58.9	16.1
1978	23,228.4	7,912.8	34.1	414.3	67.3	16.2
1979	24,960.2	7,385.9	29.6	480.8	76.1	15.8
1980	28,373.1	8,922.7	31.4	525.9	69.9	13.3
1981	30,462.2	8,822.5	29.0	610.3	70.5	11.6
1982	32,007.3	9,134.6	28.5	627.8	51.3	8.2
1983	33,687.2*	9,497.0*	28.2	630.7	54.3	8.6
1984**	36,445.8	10,998.0	30.2	691.3	74.8	10.8

*Revised budget figures
**Budget estimates

Sources: Japan, Ministry of Finance, An Outline of Japanese Taxes, 1984; U.S. Council of Economic Advisers, Economic Report of the President, 1960, 1984.

Table 2: Subnational Corporate Taxes

Japan

(in billions of yen)

Fiscal Year	Total Subnational Corporate Taxes	Percentage of National Corporate Taxes
1960	Y254.1	44.3%
1965	442.0	47.7
1970	1,330.5	51.8
1975	2,324.0	56.3
1976	2,714.9	56.7
1977	3,144.1	56.5
1978	3,359.8	42.5
1979	4,040.6	54.7
1980	4,697.0	52.6
1981	5,022.0	56.9

United States

(in millions of dollars)

Calendar Year	Total Subnational Corporate Taxes	Percentage of National Corporate Taxes
1960	$1,180	5.5%
1965	1,929	7.6
1970	3,738	11.4
1975	6,642	16.4
1976	7,273	17.6
1977	9,174	16.7
1978	10,738	17.9
1979	12,128	18.5
1980	13,321	20.6
1981	14,143	23.1

Sources: Japan, Prime Minister's Office, Japan Statistical Yearbook, 1966, 1972, 1982, 1983; U.S. Department of Commerce, Statistical Abstract of the United States, 1984.

Table 3: Sales and Taxes of Corporations by Capital

Japan, FY 1982

(in billions of yen)

Capital (millions of yen)	Number of Corporations	Percentage of Total	Total Sales	Total Taxes	Tax/Sales Ratio
Less than 1	201,318	13.1%	Y23,640.8	Y224.5	0.95%
1 to 5	784,760	50.9	79,651.6	479.9	0.60
5 to 10	267,174	17.3	56,873.6	446.2	0.78
10 to 50	249,413	16.2	161,028.2	1,539.9	0.96
50 to 100	20,903	1.4	51,795.7	567.5	1.10
100 to 1,000	15,276	1.0	123,001.0	1,410.5	1.15
1,000 to 5,000	1,782	0.1	77,938.8	1,074.9	1.38
5,000 to 10,000	351	0.0	51,845.9	763.6	1.47
Over 10,000	322	0.0	219,605.1	3,007.0	1.37
Total	1,541,299	100.0	845,380.6	9,514.0	1.13

United States, FY 1981

(in millions of dollars)

Total Assets	Number of Returns	Percentage of Total	Total Receipts	Total Taxes	Tax/Receipts Ratio
Less than 0.1	1,569,503	55.8%	$306,088.6	$2,345.7	0.77%
0.1 to 0.25	515,966	18.3	225,289.2	1,046.8	0.46
0.25 to 0.5	295,683	10.5	245,168.4	1,425.2	0.58
0.5 to 1	192,441	6.8	302,616.6	2,035.9	0.67
1 to 5	177,424	6.3	777,263.7	7,297.1	0.94
5 to 10	23,739	0.8	296,206.6	3,698.1	1.25
10 to 25	17,480	0.6	326,592.8	5,089.7	1.56
25 to 50	8,385	0.3	235,395.8	3,816.4	1.62
50 to 100	5,226	0.2	254,200.6	4,197.8	1.65
100 to 250	3,412	0.1	381,543.4	5,870.7	1.54
Over 250	3,141	0.1	3,675,063.0	65,419.4	1.78
Total	2,812,420	100.0	7,026,351.8	102,257.9	1.46

Sources: Japan, Ministry of Finance, An Outline of Japanese Taxes, 1984; U.S. Internal Revenue Service, Statistics of Income, Corporation Tax Returns, 1981.

Table 4: Taxable Income and Corporate Taxes by Capital

Japan, FY 1980

(in billions of yen)

Capital (millions of yen)	Number of Corporations	Share of Total	Taxable Income	Net Taxes	Tax Rate
Less than 1	211,619	14.6%	Y398.4	Y105.3	26.4%
1 to 5	749,961	51.7	1,488.2	480.0	32.3
5 to 10	237,674	16.4	1,166.6	396.3	34.0
10 to 100	233,947	16.1	5,389.2	1,946.2	36.1
100 to 1,000	14,066	1.0	3,593.0	1,327.7	37.0
1,000 to 5,000	1,661	0.1	2,618.2	931.3	35.6
5,000 to 10,000	325	0.0	1,587.2	586.6	37.0
Over 10,000	296	0.0	6,089.1	1,815.0	29.8
Total	1,449,549	100.0	22,330.0	7,560.2	33.9

United States, FY 1981

(in millions of dollars)

Total Assets	Number of Returns	Share of Total	Taxable Income	Net Taxes	Tax Rate
Less than 0.1	1,569,503	55.8%	$7,635.3	$1,357.8	17.8%
0.1 to 0.25	515,966	18.3	5,178.2	779.2	15.0
0.25 to 0.5	295,683	10.5	6,096.9	1,095.7	18.0
0.5 to 1	192,441	6.8	7,162.9	1,614.2	22.5
1 to 5	177,424	6.3	19,206.6	6,124.5	31.9
5 to 10	23,739	0.8	8,602.4	3,162.3	36.8
10 to 25	17,480	0.6	11,598.6	4,263.7	36.8
25 to 50	8,385	0.3	8,550.6	2,994.1	35.0
50 to 100	5,226	0.2	9,271.4	3,233.7	34.9
100 to 250	3,412	0.1	12,876.4	4,322.6	33.6
Over 250	3,141	0.1	145,284.8	29,491.9	20.3
Total	2,812,420	100.0	241,496.4	58,444.7	24.2

Sources: Japan, Prime Minister's Office, Japan Statistical Yearbook, 1983; U.S. Internal Revenue Service, Statistics of Income, Corporation Tax Returns, 1981.

Table 5: Taxable Income and Corporate Taxes by Industry

Japan, FY 1980

(in billions of yen)

Industry	Number of Corporations	Share of Total	Taxable Income	Net Taxes	Tax Rate
Agriculture, forestry and fisheries	14,244	1.0%	Y65.4	Y21.7	33.2%
Mining	5,258	0.4	565.0	42.8	7.6
Construction	202,488	14.0	1,498.4	509.6	34.0
Textiles	25,051	1.7	274.8	94.3	34.3
Chemicals	36,799	2.5	2,434.8	867.2	35.6
Steel and metal manufactures	56,183	3.9	1,527.8	536.5	35.1
Machinery	60,224	4.2	3,571.1	1,252.2	35.1
Food	38,983	2.7	710.6	254.5	35.8
Printing and publishing	32,042	2.2	521.7	191.2	36.6
Other manufacturing	90,669	6.3	1,138.5	408.5	35.9
Wholesale and retail	465,236	32.1	4,709.0	1,606.2	34.1
Finance, insurance and real estate	131,715	9.1	2,788.6	921.0	33.0
Transportation and public utilities	52,449	3.6	952.6	327.6	34.4
Services	233,071	16.1	1,190.1	414.1	34.8
Total	1,449,549	100.0	22,330.0	7,560.2	33.9

United States, FY 1981

(in millions of dollars)

Industry	Number of Returns	Share of Total	Taxable Income	Net Taxes	Tax Rate
Agriculture, forestry and fisheries	85,370	3.0%	$1,728.8	$414.4	24.0%
Mining	33,363	1.2	9,479.2	1,685.5	17.8
Construction	276,395	9.8	6,611.0	1,868.1	28.3
Textiles	21,963	0.8	3,546.0	1,215.4	34.3
Chemicals	10,247	0.4	15,293.6	2,787.0	18.2
Steel and metal manufactures	45,233	1.6	11,762.9	3,357.9	28.5
Machinery	40,560	1.4	24,780.0	5,900.0	23.8
Food	16,425	0.6	10,162.7	2,804.9	27.6
Printing and publishing	36,355	1.3	4,929.3	1,667.2	33.8
Other manufacturing	80,514	2.9	62,941.6	12,383.2	19.7
Wholesale and retail	816,836	29.0	32,359.7	10,282.6	31.8
Finance, insurance and real estate	469,795	16.7	21,903.4	6,037.5	27.6
Transportation and public utilities	109,127	3.9	23,842.8	5,065.5	21.2
Services	752,813	26.8	12,034.1	2,943.1	24.5
Total	2,812,420	100.0	241,496.4	58,444.7	24.2

Sources: Japan, Prime Minister's Office, Japan Statistical Yearbook, 1983; U.S. Internal Revenue Service, Statistics of Income, Corporation Tax Returns, 1981.

Table 6: Revenue Effects of Japanese Corporate Tax Measures, FY 1984

(in billions of yen)

	Gain(Loss)
A. Special Measures for Depreciation	
1. Special depreciation on qualified equipment	
1) anti-pollution devices, resource-efficient equipment	(Y38.0)
2) energy-efficient equipment	(19.0)
2. Special depreciation on manufacturing machinery used in underdeveloped areas	(15.0)
3. Special depreciation on machinery and equipment acquired by small- and medium-sized enterprises	(65.0)
4. Other	(15.0)
Subtotal	(152.0)
B. Reserves	
1. Reserve for overseas losses	(4.0)
2. Reserve for losses caused by repurchase of computers	(20.0)
3. Other	(34.0)
Subtotal	(58.0)
C. Tax Credits and Allowances	
1. Credit for research and experiments	(51.0)
2. Energy conservation investments	(46.0)
3. Electronic equipment investments by small- and medium-sized firms	(27.0)
4. Deduction for income derived from overseas technical service transactions	(23.0)
5. Other	(7.0)
Subtotal	(154.0)
Total Revenue Effects	(364.0)

Source: Japan, Ministry of Finance, An Outline of Japanese Taxes, 1984.

Table 7: Estimated Revenue Effects of U.S. Tax Measures, FY 1984

(in millions of dollars)

	Gain(Loss)
A. International Affairs	
Deferral of income from Domestic International Sales Corporations (DISCs)	($870)
Other	(615)
B. General Science, Space and Technology	
Research and development expenditures	(1,170)
Credit for increasing research and development	(645)
Other	(55)
C. Energy	
Exploration and development costs	(790)
Alternative energy sources, conservation and new technology credits	(150)
Other	(825)
D. Natural Resources and Environment	
Exclusion of interest on state and local industrial development bonds for pollution control	(1,040)
Other	(905)
E. Agriculture	(125)
F. Commerce and Housing Credit	
Exclusion of interest on small industrial development bonds	(1,090)
Capital gains	(2,075)
Investment credits	(23,590)
Accelerated depreciation on machinery and equipment	(16,885)
Safe harbor leasing rules	(2,800)
Other	(10,695)
G. Transportation	(190)
H. Community and Regional Development	(595)
I. Education, Training, Employment and Social Services	
Investment credit for ESOPs	(1,375)
Other	(1,740)
J. Health	(1,210)
K. Veterans' Benefits and Services	(185)
L. General Purpose Fiscal Assistance	
Exclusion of interest on public purpose state and local debt	(7,270)
Tax credit for corporations receiving income from business in U.S. possessions	(1,075)

Source: U.S. Office of Management and Budget, The U.S. Budget for Fiscal Year 1985, Special Analysis G.

Table 8: Estimated Revenue Effects of FY 1984 Tax Reforms

Japan

(in billions of yen)

	Gain(Loss)
Measures to promote investments	(Y71)
Increased corporate income and other commodity tax rates	799
Abolishment of postponement of corporate income taxes, disallowance of carryback losses, etc.	60

United States

(in millions of dollars)

	Gain(Loss)
Postponement of various provisions	$297
Treatment of bonds and other debt instruments	53
Corporate tax provisions	101
Accounting changes	289
Foreign provisions	32
Depreciation and related provisions	84
Miscellaneous	271

Sources: Japan, Ministry of Finance, An Outline of Japanese Taxes, 1984; U.S. Congress, Joint Committee on Taxation, Summary of Tax and Spending Reduction Provisions (within the Jurisdiction of the Committees on Ways and Means and Finance) of H.R. 4170 as passed by the House and the Senate.

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IMPORT QUOTAS AND THE AUTOMOBILE INDUSTRY: THE COSTS OF PROTECTIONISM

A STUDY BY ROBERT W. CRANDALL OF THE BROOKINGS INSTITUTION*

Summary

The Reagan administration must soon decide whether to lobby Tokyo for a fifth year of restrictions on exports of Japanese cars to the United States. In developing a consensus on this difficult issue, U.S. trade policymakers will have to weigh the costs of the restraints to consumers in terms of higher prices for both American-made and imported cars against the effects of continued protection on the financial condition of domestic automotive manufacturers and on employment opportunities for workers. In the following article, Robert W. Crandall, a senior fellow in the Economic Studies program at The Brookings Institution, examines this trade-off.

Introduction

The American automobile industry had a very good year in 1983: New car sales jumped up by nearly one million units, and, as has been well-publicized, after-tax profits soared to a record $6.2 billion. But the industry is not quite as robust as these statistics suggest. U.S. automobile companies have been playing with a home-field advantage -- quotas on Japanese imports, negotiated in 1981 and now extended through 1985.

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This article explores the effects of the quotas -- on automobile prices and on the profits of domestic manufacturers. The essay begins, however, by tracing the recent history of the automobile industry; it is important, in assessing the impacts of the quotas, to understand why they were sought in the first place.

The Past as Prologue

Sales - Before the 1958 recession, the U.S. automobile industry appeared to be a stable, invincible oligopoly. From time to time, ardent trustbusters would suggest that the government should initiate antitrust proceedings against General Motors [Corp.] in order to increase competition in the industry. It seemed highly unlikely that foreign producers would ever be able to capture a substantial share of the U.S. market. Although Volkswagen enjoyed some success in the late 1950s, import sales then tapered off -- dropping below five percent of total sales by 1962, as Table 1 indicates.

That decline proved to be short-lived; in the next eight years, the proportion of U.S. sales accounted for by imports tripled, settling at about 15 percent for the years 1970-74. Ford [Motor Co.] and General Motors responded to the stepped-up competition from small imported cars by launching their Pinto and Vega model lines, but neither of these proved particularly successful. When the second oil shock occurred in 1978-79, fuel-efficient foreign cars became more popular than ever; in 1980, 28 percent of the new cars registered were imports.

While the sales of imports have increased since 1965, growth in the demand for new cars has decreased. From 1965 through 1970, sales were essentially flat, deviating little from an annual rate of nine million cars; this leveling-off came after more than a decade of substantial sales growth. Sales were at a higher plateau between 1971 and 1979, averaging about ten million cars per year, but most of this increase was absorbed by imports, particularly those from Japan. As a result, even during the relatively prosperous period of 1976-79, the demand for domestic cars was about the same as it had been in 1965-66. That demand then plummeted during the first four years of the 1980s, as U.S. manufacturers managed to sell only about 6 million new cars per annum -- far below their totals in the recession-plagued years of 1970 and 1975.

As Table 2 shows, the profit rates of U.S. automobile manufacturers fluctuated wildly during the 1970s, ranging between 6.1 percent and 18.7 percent on equity. Then, in 1980, the bottom fell out; the firms lost $4 billion on sales of 6.3 million cars. This was the worst year in the industry's history; its profit rate of -9.3 percent was 23.2 percent below the average for all manufacturing. When sales had declined sharply in 1970 and again in 1975, U.S. manufacturers had managed to earn positive rates of return. In 1961, with sales of only 5.2 million cars, the companies had earned 11 percent on equity. Clearly, the industry's difficulties in 1980 -- and in the two years that followed -- reflected more than just cyclical swings in the economy. What had gone wrong?

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Regulation - One source of vexation has been the federal government, which has saddled the industry with a succession of new regulatory requirements. Safety regulation began in 1966, federal emissions controls in 1968, and fuel-economy regulation in 1978. The costs of safety and emissions regulation have been substantial; as Table 3 shows, they reached nearly $2,000 per car by the early 1980s.

Prior to 1972, emissions control costs were negligible, and safety equipment costs were less than $200 per car. Both categories of costs then rose sharply, however. Automobile manufacturers struggled with the technology of emissions control while trying to convince the government that its timetable for control was much too stringent. For at least two years and perhaps longer, the companies used relatively inefficient fixes to constrain emissions. The results were poor performance, severely depressed fuel economy, and widespread dissatisfaction.

At about the same time, the Department of Transportation was imposing two major new safety regulations on the industry -- requirements for seat belt interlocks and energy-absorbing bumpers. The interlock requirement was quickly repealed by Congress in response to bitter complaints from new-car buyers, but manufacturers had already spent time and money on the design and fabrication of interlock systems. The bumper requirement was surely a masterstroke of bad timing; it added substantially to the weight of cars -- and detracted significantly from their fuel economy -- just as the Arab oil embargo was driving gasoline prices up.

The second big regulatory surge came in 1980-81. The industry managed to stave off a new requirement for passive occupant restraints, but only at the last minute. Product planners had to be prepared to install passive seat belts or air bags in some models in 1982 before the Department of Transportation relieved them of this requirement in mid-1981. In addition, emissions standards were tightened substantially in 1980-81, necessitating major changes in ignition systems and control devices.

Unfortunately, these regulatory initiatives came right after the second oil shock and an attendant surge in the sale of Japanese imports. At the same time that U.S. manufacturers were struggling to redesign and downsize their cars as quickly as possible, they had to introduce new emissions-control technologies and to develop passive restraint systems. The Japanese car companies appear to have adjusted to the regulatory requirements more readily than their American rivals, perhaps because they did not need to downsize their product lines simultaneously.

The safety regulations and the pre-1980 emissions controls appear to have been effective, but the gains they produced have not been without their costs. For consumers, safety and emissions standards have increased the prices of new cars by at least $1,000 and reduced both fuel economy and performance. As a result, they have reduced the demand for new cars. Had emission controls been kept at 1979 levels and the energy-absorbing bumper left a matter of market choice, new car sales would have been higher and regulatory headaches fewer for an increasingly besieged Detroit.

More recently, the Corporate Average Fuel Economy (CAFE) standards, legislated by Congress in 1975 and implemented by the Department of Transportation, have placed U.S. companies in the difficult position of trying to meet the resurgent demand for larger cars while still making progress towards the 1985 goal of 27.5 miles per gallon for their fleets.

Product Quality - An unfortunate consequence of the turbulence of the 1970s was a sharp decline in the product quality of U.S. automobiles relative to that of Japanese imports. This decline was reflected not only in the "fit and finish" of cars -- that is, the fit of body panels and the general quality of exterior finish -- but also in the frequency of repairs. In 1970, as Table 4 shows, the repair records of U.S. cars were only marginally worse than the records of Japanese imports in the first few years of service. These differences may have narrowed or disappeared in later years of service. By 1976, however, Japanese cars had much better repair records than their American counterparts -- and this gap has persisted and even widened in the years since then. It should be noted that the continuing declines in quality reported in Table 4 are not confined to the new downsized front-wheel drive models, but have occurred across the entire model lines of the U.S companies.

Production Costs - The quality advantage of Japanese cars was no doubt one factor in the shift of American buyers toward imports; another factor was the loss of U.S. competitiveness in the production of smaller cars. Since 1980, there have been numerous attempts to quantify the differences between U.S. and Japanese production costs for subcompact cars. Estimates of the Japanese advantage range from $1,300 to $2,500 per car, a substantial fraction of the average delivered price of these models. Those who have studied this question agree that the main sources of the cost disparity are differences in wage rates, labor productivity, management practices, and inventory costs.

Part of the U.S. industry's problem derives from its own collective bargaining; it has granted large wage increases to its unionized workers rather than risk strikes or labor unrest. As indicated in Table 5, the result has been hourly employment costs that are about 60 percent above the average for all U.S. manufacturing firms. In Japan, by contrast, automobile companies pay their workers only 25 percent more per hour than what the average Japanese industrial worker receives. Moreover, the differences between the hourly employment costs of U.S. and Japanese car manufacturers has been widening -- from about $6 in the mid-1970s to about $11 now -- even though productivity growth in the Japanese firms has been more rapid.

The surge in demand for Japanese imports was followed by a sharp upturn in the value of the dollar. From the beginning of 1980 through the third quarter of 1982, the dollar appreciated against the yen by more than 30 percent. Even today, the value of the dollar in terms of the yen is 20 percent higher than it was in January 1980. This depreciation of the yen has added considerably to the Japanese cost advantage over U.S. automobile producers.

Paying for Protection: The Import of Quotas

In 1980, the U.S. industry began to appeal for temporary protection from Japanese imports. In July 1980, the International Trade Commission [ITC] initiated an investigation under Section 201 of the Trade Act of 1974. This proceeding did not result in an ITC decision to recommend trade relief measures. In 1981, however, President Reagan announced that agreement had been reached with Japan on a voluntary export restraint (VER) that would limit Japanese automobile exports to the United States, beginning that April, to 1.68 million cars per year.

The Reagan decision did not arouse much opposition since it followed a year in which U.S. automobile manufacturers lost approximately $4 billion. Employment in the industry had fallen by more than 20 percent; approximately a third of that decline was due to a sharp rise in import sales. Moreover, Chrysler Corp. had recently been saved from bankruptcy by federal loan guarantees, and Chrysler workers had taken substantial pay cuts.

The voluntary export restraint negotiated with Japan was renewed in 1983 for the 1984-85 period, but with a slightly higher limit of 1.85 million cars per year. By 1983, however, the industry had returned to at least the appearance of financial health, generating more than $6 billion in after-tax profits. The price of Japanese cars surged, U.S. manufacturers paid substantial bonuses to their executives, and commentators began to question the wisdom of continuing the restraint agreement with Japan.

The Rationale - The Reagan administration obtained temporary quotas on Japanese imports in order to buy the U.S. automobile industry and its workers time to adjust to the new rigors of world competition. It anticipated that during this adjustment period, car companies might undertake the substantial tooling required for the manufacture of new models, launch major investment programs designed to lower production costs in existing plants, establish new plant configurations, reduce inventory costs, and seek changes in union work rules and wage agreements. After a few years, the industry would be able to compete effectively once again -- unless its cost disadvantages were rooted in fundamental economic forces beyond its control, such as exchange rates, raw material costs, or a shift of comparative advantage to lower-wage countries.

There was and is another possible outcome: Trade protection might simply provide an opportunity for increases in automobile prices, wages, and company profits. A reduction in the availability of imports inevitably increases the demand for U.S. automobiles, opening the door for price hikes. The resulting increases in profits could provide an enticing target for union negotiators in the next round of bargaining. With foreign competition temporarily (or permanently) reduced, workers have less incentive to moderate their wage demands or to allow fundamental changes in work rules.

Which of these outcomes seems more likely? Past experience with trade restrictions hardly suggests that they offer a guarantee of industrial renaissance. The steel industry has enjoyed some form of protection over most of the past fifteen years, but it has not recovered. Trade protection for manufacturers of television receivers or shoes has hardly returned the United States to a dominant position in these industries. If past experience is any guide, one should not expect the Japanese VERs to be a miracle cure for the U.S. automobile industry.

The Industry's Adjustment - In fact, U.S. companies had begun to adjust to the new world of high gasoline prices and international competition some time before the VERs took effect. There is every reason to believe that the industry was well on its way to renewed competitiveness. Manufacturers had focused more on small cars since the two oil shocks, and by 1981 had reduced the average weight of a domestic car 30 percent from its 1972-73 high. Similarly, by 1980 the industry was selling 40 percent of its cars with four-cylinder engines, up sharply from 9 percent in 1972-73. Fuel economy was up by more than 25 percent over what it had been in 1972-73 for cars of the same weight and horsepower; actual fuel economy increased much more than that, as buyers shifted to smaller cars.

The investment expenditures of the automobile companies are further evidence of their pre-1981 adjustment efforts. Between 1975-76 and 1979-80, as Table 6 shows, real investment outlays increased by more than 88 percent. More focused census data show that investment in plant, equipment, and special tooling rose more than 87 percent over the same period. In short, the industry had invested enormous sums in new models before the establishment of quotas. Since 1981, real investment expenditures by the automobile industry have fallen by 30 percent. Buyers have begun once again to demand larger cars; eight-cylinder cars accounted for 31 percent of 1983 sales, up from 24 percent in 1981. New or modified models abound: Ford has introduced a new series of front-wheel drive cars and a modified version of its older rear-wheel drive Thunderbird; Chrysler has added a new sports car and a series of vans to its product line; and General Motors has downsized its larger cars. But the major changes were in place before the quotas were; by March 1981, Ford's Escort, Chrysler's Aries-Reliant, and General Motors' X-, J-, and A-body cars were either on the market or nearly ready for introduction. It is difficult to trace any differences in product offerings to the quotas.

Nor has productivity soared as a result of the quotas. Between 1977 and 1982, productivity growth in the motor vehicle industry was 0.4 percent, as compared with 0.2 percent in the nonfarm business sector. From 1980 to 1982, the industry outperformed the rest of the nonfarm business economy, but, given the depth of the 1982 recession, it is difficult to draw any firm conclusions from these data. In 1982, the UAW [United Auto Workers Union] agreed with Ford and GM to forego some wage increases in order to stem the flow of red ink from these companies' domestic financial statements. These agreements followed similar, but larger, concessions granted to Chrysler in previous years. In addition, the industry has attempted to increase productivity by investing in labor-saving equipment and improving worker morale. At this juncture, there is insufficient evidence to judge the success of these attempts. Indeed, General Motors' decision to produce subcompacts jointly with Toyota [Motor Corp.] in California appears to be an attempt to break out from the restrictive work rules with which it is saddled in other plants. When 1983 data become available, we may be able to say a little more about the impact of these efforts.

Effects on Automobile Prices - There is no doubt but that by creating an artificial scarcity of Japanese imports, the voluntary restraints have increased the prices charged for these cars; the only question is by how much. A 1983 Wharton Econometrics study estimated that as a result of the quotas, the prices of Japanese imports jumped up an average of $920 to $960 per car in 1981-82 alone. With the surge in demand that took place in 1983, this price effect has surely increased substantially -- which means that our assistance for the U.S. industry has benefited Japanese producers and their dealers by at least $2 billion per year in price enhancement. From the standpoint of American taxpayers, a tariff clearly would have been a better policy choice than the voluntary restraints.

The effect of the restraints on the prices of U.S. cars is more open to dispute. It is not easy to estimate this effect because the mix of automobiles is constantly changing. Indeed, some industry officials believe that any recent price increases above the cost of producing cars have been due to mix changes, not imports. But if the VERs reduce the potential supply of new Japanese cars in the United States (and they surely do), they must increase the demand for American automobiles. Historically, the average price of automobiles in the United States has varied directly with the strength of demand; therefore, one would expect the VERs to increase the prices of domestic cars.

Assume for a moment that the VERs have simply increased the U.S. industry's market share by 5 to 8 percent, without increasing prices; given the trend in import sales between 1978 and 1981, this range probably represents the maximum effect of the quotas on market shares. In 1983, a 5 to 8 percent shift would have meant the purchase of an additional 445,000 to 712,000 domestic cars, assuming no effect on total car sales. My current research suggests that the marginal profit on these cars, before taxes, would have been about $2,000 per car -- for a total of $0.89 to $1.42 billion, less than the gain realized by Japanese companies and their dealers. (Of course, if the VERs have increased domestic car prices, then the additional profits made by U.S. manufacturers would be substantially higher.)

I used several techniques to estimate the impact of the quotas on domestic car prices, and while I would not claim that the result of any one of the tests are definitive, the fact that the outcomes are so similar does suggest that the price effect of the quotas is in the range indicated.

One way to gauge that effect is to relate U.S. car prices to costs and demand over a substantial period of time and then to use the resulting equation to predict prices under the VERs in 1981-83. I developed a pricing model for the period 1961-80, incorporating labor costs, capital costs, regulatory requirements, the price of steel, the strength of demand, and dummy variables for years of price controls. As indicated in part 1 of Table 7, the model tracks the annual average prices of new cars in this 20-year period with an average error of only about $56. However, the equation underestimates prices for 1983 by more than $800 per car and for 1981-83 by a yearly average of $430. Since the model was built using the Commerce Department's series on actual transactions prices, it reflects discounts from list prices. It does not, however, standardize for changes in the mix between small and large cars or in the mix of options. These changes occurred in the 1960s and 1970s, and the equation tracked prices very well for those two decades. The only major difference between the 1970s and, say, 1983 is the presence of an import restraint; it seems reasonable to infer that the VER must account for a substantial share of the excess of actual prices over predictions.

A second method for analyzing shifts in automobile prices is the use of a so-called hedonic model that reflects the qualitative attributes of each car. I gathered data on 176 domestic models tested by Consumer Reports from 1970 through 1983; complete data were available for 172 of these cars. The following factors were included in the model: weight, acceleration, the estimated quality of ride, the estimated handling capability, the cost per mile of gasoline consumed, and the size-class of the car (subcompact, compact, intermediate, full size, or luxury). When specific dummy variables are used for each year, the model estimates that the real list price of small cars increased by 12 percent, or $826 per car, in the 1981-83 period. These increases in the real price of cars, holding the qualitative attributes constant, include the effects of tighter emissions control standards set by the government in 1980-81. These standards added $454 (1982 dollars) to the cost of small new cars, which must be deducted from the estimated increase in the real, quality-adjusted price. Thus, as shown in part 2 of Table 7, the hedonic model estimates that the quotas increased list prices by an average of about $370 per car in 1981-83. This calculation does not reflect changes in dealer discounts and rebates; inasmuch as rebates have narrowed substantially since March 1981, the estimate is undoubtedly biased downward.

Finally, one can assess the impact of the VERs by examining the behavior of the Consumer Price Index [CPI] for new cars since March 1981. Historically, the CPI for cars has risen less rapidly than the total CPI. Part of the reason for this differential is that the Bureau of Labor Statistics deducts estimated improvements in quality -- including regulatory costs -- from price increases for automobiles. The total adjustment for quality improvements in 1981-83 was nearly $850, of which about $700 reflects regulatory costs. Since most other components of the CPI are not similarly adjusted, the new-car CPI should rise less rapidly than the total index, ceteris paribus.

The new-car component of the CPI increased by only 0.3 percent per year in the 1960s, while the CPI as a whole rose by 2.7 percent per year. In the 1970s, the corresponding figures were 5.1 percent and 7.5 percent. But since the inception of import quotas, the difference has narrowed remarkably. From March 1981, through December 1983, the new-car component of the CPI increased by 4.5 percent per year and the overall CPI by 4.9 percent. Had the 0.68 ratio of the 1970s persisted, we would have expected the new-car component to advance only 3.3 percent per year during this period -- 1.2 percent[age point] less than actually observed. If the prices of domestic cars had risen at this lower annual rate, then, as part 3 of Table 7 indicates, they would have been an average of $368 less than they were.

Equally striking is the behavior of the new-car CPI in the period just after the import quotas were introduced. From April through December 1981, the new-car CPI increased at a 10.3 percent annual rate, after rising at a 4.1 percent rate for the preceding 15 months. This surge occurred during a continuing decline in demand.

The various calculations just discussed are likely, for four reasons, to underestimate the impact of the quotas. First, they do not take into account the sizable interest rate subsidies that were offered in 1981. Second, the continued appreciation of the dollar and the improvement in the relative quality of Japanese automobiles would have placed relatively more downward pressure on U.S. car prices in 1981-83 than in previous periods. If there had been no quotas, we surely would have expected U.S. car prices to reflect increasing import competition. Third, wage rates paid by U.S. automobile producers grew somewhat less rapidly than average U.S. wages in 1980-83, after having increased more rapidly in 1975-80. Absent the quotas, these lower wage costs would have been reflected in new car prices. Finally, with gasoline prices falling since 1982, federal fuel economy standards have undoubtedly led U.S. companies to restrain the prices of smaller cars.

Profits - As a check on these estimates, one might look at the before-tax profits of the companies. If prices increased abnormally relative to costs, profits should have risen relative to their historical relationship with volume. To test for this outcome, I used the Commerce Department's estimate of domestic profits (before taxes) in the motor vehicle industry, adjusted for changes in inventory valuation. Table 8 shows the very strong recovery in pretax profits since 1980. Despite much lower sales volumes, the real profit per domestic vehicle produced has rebounded to 1978-79 levels. In fact, on the sale of fewer vehicles than were sold in 1975, real profits per vehicle in 1983 were more than double what they had been in that earlier year. When before-tax profits, deflated by the CPI, are fitted to total vehicle sales (including trucks and buses), the import share, a dummy variable for the 1973-74 price controls, and a dummy variable for the 1981-83 period, the results show that profits have risen by 50 percent over 1960-80 levels for the same levels of vehicle production. This translates into $280 per vehicle, including large cars, trucks, and buses. Since import restraints have not raised truck and bus prices and have had less of an impact on the prices of large cars than on those of small cars, the effect per small car must have been substantially greater than $280. These increases in profits may have been due in part to productivity gains, but a substantial share of the explanation must be the price effects of import restraints.

Employment - It is difficult to see how the VERs could have shifted more than 8 percentage points of the market from Japanese imports to U.S. cars by 1983. If the higher prices caused by the quotas had no effect on automobile sales in 1983, a market share shift of this magnitude might have saved, at most, 46,200 production jobs in the automobile industry. (A swing of 8 percentage points to U.S. automobiles would have produced an 11 percent increase in domestic sales. Assuming that the elasticity of production workers with respect to output is 0.7, this translates into a 7.7 percent increase in employment on a 1983 average base of 600,000.)

If, as was almost certainly the case, higher prices reduced total automobile sales, the effect on employment was smaller. Quotas appear to have raised prices by an average of about 5 percent, which, assuming a unitary elastic demand, translates into a 5 percent reduction in sales. Absent this reduction, total sales would have been 9.4 million units instead of about 8.9 million. If U.S. producers had obtained a 65.5 percent share of this larger total, their domestic sales would have been 6.0 million units instead of 6.4 million -- and the number of production jobs in the industry would have declined by 26,200. What that cost has been depends upon the extent of relative-price effects, welfare losses in production, and welfare losses in consumption caused by constrained consumer choice. Concentrating only on the price effects, if the average price of U.S. cars has risen $400 and the average price of Japanese imports has gone up $1,000, the cost to consumers in 1983 was $4.3 billion plus additional losses in consumer welfare due to the VERs' constraint on the choice of cars. The cost per job saved, therefore, was nearly $160,000 per year. Employment creation at this cost is surely not worth the candle.

It is possible that the number of jobs saved was substantially less than 26,200 and that the per-job cost estimate just presented is overly conservative. Falling gasoline prices and the increasing demand for larger cars should have offset some of the rising pressure on small-car sales caused by a depreciation of the yen against the dollar in 1981-83. An eight percentage point shift in market share translates into an import share of 35.5 percent in 1983 without the quotas. This would have required Japanese imports of 40 percent more than the level in 1983. While it is conceivable that Japanese imports would have risen by this much, it seems unlikely; such an increase would have required a very high price elasticity of demand for these cars, little reduction in U.S. auto prices to meet the competition, or both. Without the quotas, it is likely that U.S. automobile prices would have been lower, thus restraining the shift to the Japanese models.

Conclusion

As this article is being completed, the Japanese government is beginning to express support for the restraints on automobile exports to the United States. This support has come as a "surprise" to U.S. trade officials, according to news reports. If the restraints raise the price of Japanese cars in the United States by $1,000 per vehicle or more, the Japanese should be pleased indeed -- unless, of course, a slightly tighter or looser restraint would increase their profits even more.

Given the scant evidence that these quotas are advancing the competitiveness of the U.S. automobile industry, their desirability turns on whether Americans wish to pay large premiums on their cars in order to increase the employment of auto workers at wages far above the manufacturing average. Indeed, because they have produced high profits in the industry, the VERs may actually lead to a widening of this wage differential in the 1984 contract negotiations. If that happens, the political necessity for quotas will increase, and future presidents will have difficulty arguing that the domestic automobile industry should once again face the rigors of international competition.

* * * * * *

Table 1

U.S. New Car Registrations, 1960-83

(in millions of units)

Year	Domestic Cars	Imports	Total	Import Share
1960	6.1	0.5	6.6	7.6%
1961	5.2	0.4	5.6	6.5
1962	6.6	0.3	6.9	4.9
1963	7.2	0.4	7.6	5.1
1964	7.6	0.5	8.1	6.0
1965	8.7	0.6	9.3	6.1
1966	8.3	0.7	9.0	7.3
1967	7.6	0.8	8.4	9.3
1968	8.4	1.0	9.4	10.5
1969	8.3	1.1	9.4	11.2
1970	7.2	1.2	8.4	14.7
1971	8.5	1.3	9.8	15.1
1972	9.0	1.5	10.5	14.5
1973	9.7	1.7	11.4	15.2
1974	7.3	1.4	8.7	15.7
1975	6.8	1.5	8.3	18.2
1976	8.4	1.4	9.8	14.8
1977	8.8	2.0	10.8	18.3
1978	9.0	1.9	10.9	17.8
1979	8.0	2.4	10.4	22.7
1980	6.3	2.5	8.8	28.2
1981	6.0	2.4	8.4	28.8
1982	5.5	2.3	7.8	29.3
1983	6.4	2.5	8.9	27.5

Source: Automotive News, Market Data Book Issue, April 25, 1984

Table 2

After-Tax Rate of Return on Equity: U.S. Motor Vehicle Companies, 1960-83

Year	Motor Vehicles	All Manufacturing
1960	13.5%	9.2%
1961	11.4	8.8
1962	16.2	9.8
1963	16.7	10.2
1964	16.9	11.6
1965	19.5	13.0
1966	15.9	13.4
1967	11.7	11.7
1968	15.1	12.1
1969	12.6	11.5
1970	6.1	9.3
1971	13.0	9.7
1972	14.6	10.6
1973	15.3	13.0
1974	7.0	14.9
1975	6.2	11.6
1976	17.0	14.0
1977	18.7	14.2
1978	17.0	15.0
1979	10.9	16.5
1980	-9.3	13.9
1981	-0.7	13.7
1982	0.9	9.2
1983	16.7	10.1

Source: Federal Trade Commission

Table 3

The Cost per Automobile of Federal Safety and Emissions Regulation, 1966-81

(in current dollars per car)

Year	Equipment Costs: Safety	Equipment Costs: Emissions	Equipment Costs: Total	Total Costs*
1966	$ 40	$ 0	$ 40	$ 40
1967	73	0	73	73
1968	115	14	129	129
1969	129	15	144	144
1970	157	24	181	181
1971	166	25	191	191
1972	171	25	196	366
1973	258	44	302	790
1974	380	49	429	970
1975	358	119	477	664
1976	373	126	499	696
1977	384	123	507	850
1978	393	133	526	895
1979	421	148	569	980
1980	467	222	689	1,373
1981	494	600	1,094	1,894

*Including maintenance and fuel economy penalty.

Source: Crandall *et al*, forthcoming study of automobile regulation

Table 4

Average Consumer Reports Quality Ratings for U.S. and Japanese Cars

Year	Japanese Imports	GM	Ford	Chrysler
1970	2.33	2.81	3.18	3.85
1976	1.13	3.03	2.80	3.91
1981	1.05	4.33	3.17	4.50

Note: 1 = Much better than average
2 = Better than average
3 = Average
4 = Worse than average
5 = Much worse than average

Source: *Consumer Reports*, April 1972, April 1978, and April 1983

Table 5

Total Hourly Compensation in the Motor Vehicle Industry and All Manufacturing - United States and Japan, 1975-83

(dollars per hour)

	United States		Japan	
Year	Motor Vehicles	All Manufacturing	Motor Vehicles	All Manufacturing
1975	$ 9.44	$ 6.35	$3.56	$3.05
1976	10.27	6.93	4.02	3.30
1977	11.45	7.59	4.82	4.03
1978	12.67	8.30	6.85	5.54
1979	13.68	9.07	6.90	5.49
1980	16.29	9.89	6.89	5.61
1981	17.28	10.95	7.65	6.18
1982	18.66	11.68	7.18	5.70
1983	19.02	12.31	7.91	6.24

Source: Bureau of Labor Statistics

Table 6

U.S. Motor Vehicle and Equipment Producers' Gross Investment Expenditures, 1970-83

(in millions of dollars)

Year	Current Dollars	1972 Dollars*
1970	$3,050	$3,341
1971	2,420	2,516
1972	3,000	3,000
1973	3,830	3,630
1974	4,300	3,726
1975	3,350	2,534
1976	3,620	2,612
1977	5,820	3,978
1978	7,215	4,590
1979	8,305	4,862
1980	9,060	4,866
1981	10,078	4,992
1982	7,920	3,777
1983	7,233	3,496

*Using Bureau of Economic Analysis implicit price deflator for nonresidential plant and equipment

Source: U.S. Department of Commerce

Table 7

Three Estimates of the Effect of Quotas Upon U.S. Car Prices

1. Average price of new domestic cars sold = f(labor cost, capital cost, regulatory cost, price of steel, 1972-74 price controls, vehicle sales)

   Period of estimation: 1961-80. Standard error: $56.

   Excess of actual prices over predicted prices:

1981	$237
1982	$236
1983	$829

2. Hedonic Model: Price of a new domestic car = f(weight, ride, handling, acceleration, size class, gasoline cost, dummy variables for various years)

   Period of estimation: 1970-83 models (172 cars).

   Increase in estimated value (per unit) during quota years for small cars:

   Years: 1981-83
   Total: $826
   Additional regulatory costs: $454
   Net Value: $372

3. Annual increase in consumer price index:

Period	1. Total CPI	2. New-Car CPI	Ratio 2/1
1960-70	2.7%	0.3%	0.11
1970-80	7.5	5.1	0.68
March 1981-December 1983	4.9	4.5	0.92
March 1981-December 1983 (at 1970s' ratio)	4.9	3.3	0.68

   Difference in behavior of new-car CPI relative to total CPI in March 1981-December 1983 compared with difference in 1970s:

   4.5% - 3.3% = 1.2% per year.

   Effect on new domestic car prices of 1.2% greater increase per year:

   Actual 1983 Average Price: $10,484
   Predicted 1983 Average Price: $10,116
   Difference: $368

Table 8

U.S. Motor Vehicle Industry's Profits Before Taxes*, 1970-83

Year	Before-Tax Profits (billions of dollars)	Before-Tax Profits (billions of 1972 dollars)	Before-Tax Profits per Vehicle** (1972 dollars)
1970	$ 1.2	$ 1.3	$ 160
1971	5.0	5.2	490
1972	5.9	5.9	520
1973	5.7	5.3	423
1974	0.1	0.0	472
1975	1.9	1.5	165
1976	7.2	5.3	461
1977	9.4	6.5	513
1978	8.9	5.7	443
1979	4.7	2.7	235
1980	-3.8	-1.9	-239
1981	-0.6	-0.3	-37
1982	0.9	0.2	27
1983	7.7	3.2	353

*With inventory valuation adjustment
**Vehicles include all cars, trucks and buses

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, annual issues; Motor Vehicle Manufacturers Association, *Motor Vehicle Facts and Figures*, annual issues

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Japan's Growth Slows in Third Quarter

A steep drop in the growth of exports and a jump in the expansion of imports sharply cut Japan's third-quarter real gross national product (GNP) growth, and underscored the importance of exports despite an improving domestic situation. The Economic Planning Agency (EPA) stated, however, that the official growth estimate for fiscal 1984 (which ends March 30, 1985) would not be lowered, reflecting the view that the economy will pick up in the current quarter.

The breakdown by component of Japan's GNP (see accompanying table) reveals the severity of the pullback in exports -- the annualized rate of growth was cut by two-thirds -- as well as the jump in imports, which increased at almost triple the previous quarter's pace. As a result, the growth rate of

Japan's Real Gross National Product at Constant Prices (1975 Prices)

(in billions of yen, seasonally adjusted, quarterly totals and rates of growth at annual rates)

	FY 1982	FY 1983	October-December 1983	January-March 1984	April-June 1984	July-September 1984
Gross National Product	Y205,260.3 (3.3%)	Y212,784.9 (3.7%)	Y214,817.3 (5.7%)	Y217,927.5 (5.9%)	Y221,934.9 (7.6%)	Y223,570.1 (3.0%)
Personal Consumption Spending	108,092.5 (4.6%)	111,219.7 (2.9%)	111,886.4 (3.7%)	112,899.1 (3.7%)	113,323.8 (1.5%)	114,156.1 (3.0%)
Private Residential Construction	10,805.2 (1.3%)	10,016.6 (-7.6%)	10,105.7 (8.4%)	9,958.3 (-6.0%)	9,826.1 (-5.4%)	9,966.1 (5.8%)
Private Fixed Nonresidential Investment	35,208.3 (2.8%)	36,540.0 (3.8%)	37,638.3 (11.7%)	38,716.6 (12.0%)	39,678.7 (10.3%)	40,599.5 (9.6%)
Change in Business Inventories	1,237.9 (-30.4%)	704.0 (-43.1%)	1,374.1 (562.4%)	834.6 (-276.1%)	1,155.2 (267.0%)	1,479.3 (168.9%)
Government Current Expenditures	19,347.3 (2.0%)	19,951.4 (3.1%)	19,816.9 (-0.5%)	19,991.6 (3.6%)	20,152.2 (3.3%)	20,260.4 (2.2%)
Government Fixed Investment	18,470.2 (1.1%)	18,457.9 (-0.1%)	18,134.0 (-18.0%)	17,632.7 (-11.5%)	18,368.9 (17.8%)	18,504.7 (3.0%)
Change in Government Inventories	-371.2 (-136.3%)	-261.9 (-29.4%)	-432.9 (*)	-74.5 (*)	6.4 (*)	488.0 (*)
Net External Sector	12,470.2 (6.9%)	16,157.2 (29.6%)	16,294.8 (5.2%)	17,969.5 (47.9%)	19,423.6 (36.5%)	18,116.0 (-29.8%)
Exports of Goods and Services and Factor Income Received	40,282.6 (0.7%)	44,060.4 (9.4%)	45,140.9 (18.2%)	47,208.2 (19.6%)	49,462.1 (20.5%)	50,290.6 (6.9%)
Imports of Goods and Services and Factor Income Paid	27,812.4 (-1.9%)	27,903.2 (0.3%)	28,846.1 (26.5%)	29,238.7 (5.6%)	30,038.5 (11.4%)	32,174.6 (31.6%)

*Cannot be calculated or meaningless.

Source: Economic Planning Agency

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U.S.-JAPAN COMPETITION IN MOTOR VEHICLE PARTS

Summary

Motor vehicle parts represent the third-largest U.S. import from Japan, yet they have never attained the high visibility of cars and steel in bilateral trade relations. This could change. The American parts industry, which is going through a period of unprecedented change because of new purchasing policies in Detroit and increased foreign competition in the domestic market, is starting to sound the alarm over Japanese automotive components. Purchases from Japan are increasing, but only partially in response to the expansion of the U.S. replacement parts market for Japanese cars and trucks -- a market American suppliers claim is largely closed to them. Much of the import growth reflects greater outsourcing by Detroit and the start of Japanese vehicle assembly operations in the United States.

An Industry Buffeted by Change

The 2,000 or so U.S. companies manufacturing engines, transmissions, brakes, electrical and lighting equipment, exhaust and suspension systems, body parts and the several thousand other components, accessories and materials that go into a car or truck have been caught in the crosscurrents of change for the last six years. For starters, domestic production of cars and trucks, after hitting a record 12.9 million vehicles in 1978, stumbled in 1979 and then went into a tailspin, plunging to just 6.9 million units in 1982. With at least half and perhaps as much as three-quarters of the output of the motor vehicle parts industry used in the assembly of cars and trucks, the production slump was a staggering experience for all suppliers of original equipment (OE), especially the huge number of small-scale firms in the business. In a double blow to the industry, demand for replacement or aftermarket parts did not expand as strongly during the 1979-82 sales slide as it had during earlier downturns, even though Americans were holding on to their cars and trucks longer than at any time in the postwar period.

Production of cars and trucks in the United States finally staged a comeback in 1983 and rebounded again this year to an estimated 11.2 million vehicles. While the recovery has brought much-needed OE contracts to struggling automotive parts manufacturers, business has still not returned to the boom levels of the late 1970s -- and might never, suppliers increasingly suspect, stranding them only three-fourths of the way back. At the same time, parts producers, whether independents or in-house suppliers to General Motors Corp., Ford Motor Co., Chrysler Corp. and American Motors Corp., have had to grapple with a new way of doing business in Detroit.

The Big Four U.S. motor vehicle makers are imposing more stringent quality and performance standards on production parts vendors, aware that the success of their drive to improve the international competitiveness of American cars and trucks hinges to a significant degree on better quality control by suppliers. Parts producers are also being told to hold the line on price increases or even to grant price concessions. They are being forced as well to adapt their production and delivery schedules as domestic car and truck manufacturers try to introduce "just-in-time" inventory control to final assembly operations. In addition, automotive companies are looking to their suppliers for more input in the new product design and development process.

Over time, Detroit's stiffer supplier requirements could thin the ranks of domestic OE parts producers far more than the 1979-82 slump did. Companies passing the test, though, stand an increasing chance of winning multi-year single-source contracts since the Big Four are starting to move away from their traditional annual agreements with several suppliers to build the same part. Successful independents could also benefit from another change in the parts procurement policies of U.S. motor vehicle makers: greater sourcing from outside suppliers, particularly firms with lower cost structures than those prevailing in the auto industry.

The new business environment in which American parts manufacturers operate has another dimension, and this one -- increased foreign competition in the domestic marketplace -- is generating perhaps the most difficult adjustments in the industry. Suppliers feel threatened on all sides. The lucrative and fast-growing U.S. market for replacement parts for Japanese-made cars and trucks is, by and large, dominated by their Japanese rivals, complain American companies producing for the aftermarket. They are also discovering that greater outsourcing of production parts by Detroit is a mixed blessing as the Big Four bring in more parts, including powertrain components, from affiliates in Japan and elsewhere as well as from unrelated foreign suppliers.

U.S. parts makers are quick to add that, with the exception of Canada, export markets provide few offsets for the greater import challenge they face in the United States. Japanese motor vehicle manufacturers, they argue, are

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only willing to buy a limited number of American-made OE parts for cars and trucks shipped to this country, while American automotive companies with offshore assembly operations manufacture many of the parts they need in the countries where cars and trucks are turned out. Domestic producers also claim that Japanese motor vehicle makers with U.S. assembly facilities have not sourced as many of their production parts requirements from local suppliers as they could, opting instead to import components from Japan or give their business to Japanese parts manufacturers that have followed them to the United States.

While this is certainly a biased recitation of the trade problems affecting the competitive status of the American motor vehicle parts industry, one fact is inescapable: the United States, a net exporter through 1982, is now running a substantial trade deficit in automotive parts that shows no signs of reversing itself (see Table 1). Japan's role in this complex development will be explored in this report in the hope that the various issues can at least be untangled.

Parts for Japanese Vehicles: A Closed Market?

Charges of limited U.S. access to the market for Japanese car and truck parts, whether for assembly or replacement, are not new. The issue has been around since late in the 1970s, when trade negotiators for the two countries first started looking for ways to defuse the pressure then building in the United States for legislation restricting the market inroads of Japanese cars. One obvious answer, Carter administration officials concluded, would be for Tokyo to improve access for exports of U.S. automotive parts, which totaled just $79 million in 1979 compared with deliveries here of over $1 billion worth of Japanese parts, as well as encourage motor vehicle makers in Japan to use more American-made components. Washington also suggested that the Japanese government take steps to facilitate car imports from the United States and promote U.S. manufacturing investments by the Japanese automotive industry and its parts suppliers.

Following six months of negotiations, Tokyo unveiled an automotive trade package in May 1980 that included initiatives in each of these areas. Under prodding from the Department of Commerce, Japanese car and truck manufacturers subsequently projected that their OE parts purchases from the United States would total $120 million in 1980 and hit $300 million the next year, after which, government officials promised, the industry would "make every effort" to boost imports further. Whatever skepticism U.S. parts makers harbored about the depth of Japanese interest in sourcing more components from this country, they were willing to try to expand sales of production parts, if only because Japanese manufacturers insisted that the best way to crack the American market for replacement parts -- the primary target of domestic suppliers -- was to first win OE contracts.

Even with good-faith efforts on both sides, the OE parts purchasing program had little chance for success since not enough time was available to forge new supplier relationships. Japanese motor vehicle manufacturers maintain that it generally takes one to three years after discussions are initiated with any potential supplier for a contract to be signed; since most companies in the U.S. parts industry are small-scale firms inexperienced in exporting, they add, the upper limit becomes the norm. Time was not the only problem, though. Quotes on most U.S. products were 10 to 20 percent above Japanese prices even before the dollar started gaining ground on the yen, reported purchasing managers, who noted as well that warranty periods for American parts were often shorter than for comparable Japanese components and defect compensation ranges more limited. Quality control itself was a problem, as was scheduling of deliveries.

U.S. parts exports did increase -- and continue to do so (see Table 2) in the face of a slowdown in sales to other major export markets, but few people outside the industry and the Commerce Department noticed that Japan's purchases fell far short of its 1981 goal. The reason was simple. Soon after taking office, the new Reagan administration decided that neither greater automotive product sales to Japan nor Japanese motor vehicle industry investments in this country would derail the drive on Capitol Hill for stiff import quotas on Japanese cars or domestic content legislation; only self-imposed restrictions by Tokyo on U.S.-bound car shipments would douse the protectionist fires in the United States and give American car makers breathing room to retool for the new era of small car competition. Washington consequently threw all its negotiating energy into persuading the Japanese government to limit car exports -- a goal it achieved in the spring of 1981, and the parts issue was relegated to the back burner.

Undeterred, the U.S. parts industry continued to work behind the scenes on the issue of primary concern to it all along: better access to the domestic aftermarket for Japanese cars and trucks. This persistence has started to pay off in terms of renewed Commerce Department interest, but the nature and scope of the problem remain as murky as ever, in part because of a dearth of hard data. Estimates of the size of the total U.S. automotive aftermarket vary wildly, as do figures on the role of various service and sales outlets (franchised new car dealerships, automotive repair shops, service stations, mass merchandisers, and tire, battery and accessory dealers). Equally big disparities also characterize the few available estimates of the extent and organization of the market for replacement parts for Japanese vehicles. Import statistics provide little guide since not all incoming parts are destined for the aftermarket and Japan is not the only foreign source of replacement parts for Japanese cars and trucks.

The U.S. industry has also confused the issue. When parts suppliers voice frustration about their inability to sell in the aftermarket for Japanese vehicles, they are really talking about the problems of gaining access to one distribution channel -- Japanese automotive makers' dealer networks. At most, it appears, these service facilities handle only 50 percent of all replacement parts sales, leaving at least half of the market accessible to American vendors. As even they acknowledge, the roughly 13.5 million Japanese cars and pickup trucks retailed in the United States since 1978 make this nondealer segment an enormous market for replacement parts, particularly for high turnover items like batteries, tires, spark plugs, filters, belts, tailpipes, mufflers and brake parts.

Having said this, it must also be noted that with the possible exception of products loosely categorized as accessories, American producers have had difficulties selling parts to Japanese car and truck dealers in the United States, especially major mechanical components, which continue to be imported from Japan. Japanese automotive manufacturers concede as much, but say the problem centers on the capability of domestic suppliers to meet their aftermarket requirements in terms of quality, price and availability. How can an American maker hope to match the cost structure of a Japanese company that is a primary supplier of a volume part, they ask for example.

U.S. parts suppliers, not surprisingly, take issue with this characterization of the problem. To them, it is a clear-cut case of impeded market access. Stopping short of accusing Japanese automotive makers of violating antitrust laws by telling their dealers what companies to buy from, domestic parts producers maintain that the manufacturers have an unusually strong influence on the replacement parts purchasing policies of Japanese car dealers in this country. They also complain that it is hard for American competitors to get their parts certified for use by dealers, largely because Japanese motor vehicle firms do not make available the performance requirements for their parts and frequently change the specifications without notification.

The domestic parts industry and Japanese automotive manufacturers have gone round and round on the question of access to the service operations of Japanese car dealerships since at least 1980, but the divisions remain as deep as ever. The debate, obviously, is not just academic. The steadily rising number of Japanese cars and pickup trucks on American roads and their increasing age signal a major expansion in the size of the aftermarket for these vehicles. Which distribution channels owners use for repair work and replacement parts purchases and what manufacturers supply them will determine, at a minimum, whether already-large U.S. imports of Japanese-made replacement parts continue to grow or taper off. In the absence of accurate market share information, however, the stalemated debate over the openness of the American aftermarket for Japanese vehicles will run on, straining bilateral automotive trade relations.

Detroit Goes Offshore for Parts

While replacement parts still account for the majority of motor vehicle parts imported from Japan (see Table 3), production parts purchased by General Motors, Ford and Chrysler were perhaps the fastest-growing imports during the 1979-83 period. This expansion, duplicated in the trade data for Mexico and Brazil, represents one Big Three response to the realities of the U.S. small car business -- realities that include not just stiff Japanese competition but also big swings in domestic demand for American-built subcompacts. Instead of tying up resources trying to design, develop and manufacture in-house the major mechanical components for their small car models, the three companies have turned to their Japanese affiliates for certain requirements.

Powertrain products head the list of original equipment items. General Motors has gone to Isuzu Motors, Ltd. for five-speed manual transaxles for its American-made compact J cars (Chevrolet Cavalier, Pontiac Sunbird, Oldsmobile Firenza, Buick Skyhawk and Cadillac Cimarron), as well as four-cylinder diesel engines for the Chevrolet Chevette. Ford's purchases from Mazda Motor Corp. (formerly Toyo Kogyo Co., Ltd.) include four-speed manual transaxles for domestically built Escorts and Lynxs, five-speed manual and automatic transaxies for compact Tempos and Topazs, and 2.0-liter four-cylinder diesel engines. For its part, Chrysler sources 2.6-liter four-cylinder engines from Mitsubishi Motors Corp. for its minivans and intermediates.

These Japanese companies are not the only Big Three affiliates tapped for powertrain products; each maker also brings in engines and/or transmissions from subsidiaries in Latin America and Europe. Moreover, powertrain products are just the biggest-ticket items on a long list of production parts sourced from both affiliated and unrelated firms in Japan. A sampling includes starter motors, alternators, clutches, engine mounts, hollow stabilizers, ball joints, stampings and electronic engine control devices.

Detroit's continued search for suppliers that can provide high-quality, technically sophisticated products at prices below its own production costs will undoubtedly translate into greater purchases of automotive parts from Japan, especially if the dollar remains as strong as it has been over the past three years. Japanese makers can meet the Big Three's minimun cost-savings requirements for outsourcing to Japan (reportedly 15 percent) on a wide range of parts. Some industry analysts estimate in fact that many Japanese parts are priced 30 to 40 percent below comparable products manufactured in the United States, although part of this savings is erased by transportation charges and customs duties.

As disturbing as greater outsourcing to Japan and other foreign countries is to U.S. automotive parts suppliers, both independent and captive, far more troublesome is the likelihood that General Motors, Ford and Chrysler will increasingly depend on imports for their small car offerings. Over the past year, GM has started buying a subcompact from Isuzu (Chevrolet Spectrum) and a mini car (Chevrolet Sprint) from its other Japanese affiliate, Suzuki Motor Co., Ltd. While volume has so far been limited because of the ceiling on Japan's car exports to the United States, the industry giant hopes to be able to import 300,000 units annually, perhaps as soon as next year. It also plans to begin sourcing a small car from a Korean manufacturer in 1987, the same year Ford's new Mexican-built subcompacts are expected to appear in dealer showrooms. Chrysler is also said to be considering a Korean import, which would supplement the 130,000 or so subcompacts it sources each year from Mitsubishi Motors. For domestic parts producers, deals such as these and others rumored to be in the works mean only one thing: less business.

Japanese Makers Come Onshore

While American automotive manufacturers are going offshore for both parts and vehicles, Japanese motor vehicle makers are expanding their U.S. assembly operations. Heading the by-now familiar roster is Honda Motor Co., Ltd., which has been manufacturing Accords at an annual rate of 150,000 units since late May at its Marysville, Ohio plant, opened in November 1982. Honda of America Manufacturing Inc. is now in the process of doubling capacity so that Civic production can be added in the second half of 1986. By 1987, Nissan Motor Manufacturing Corp. U.S.A. expects to be assembling 140,000 compact pickup trucks and 100,000 cars a year at its Smyrna, Tennessee factory. The plant, which went into operation in June 1983, is currently making pickups at an annual rate of 120,000 units and is being readied to start assembly next April of Nissan Motor Co., Ltd.'s Sentra subcompact.

Earlier this month, New United Motor Manufacturing Inc. (NUMMI), the joint venture between Toyota Motor Corp. and General Motors, began trial production of a Toyota-designed subcompact, to be sold in the United States under the Chevrolet Nova name. By mid-1986, the Fremont, California-based company expects to be turning out 200,000 cars annually. Roughly a year later, Mazda will become the fourth Japanese automotive maker with a U.S. assembly plant. The Ford affiliate recently announced plans to build a factory in Flat Rock, Michigan with the capacity to manufacture 240,000 cars a year in full production.

The Honda cars and Nissan trucks now being assembled in the United States contain over 50 percent local content (measured according to proposed domestic content legislation), which is also the target for NUMMI's cars when its plant reaches full production. Each company makes its own body stampings, turning out side panels, doors, fenders, hoods, truck lids, roof panels and a variety of other parts; Honda, in addition, manufactures in-house many of the Accord's molded plastic parts, including instrument panels, dashboards, bumpers and radiator grilles. Outside domestic suppliers provide a common long list of production parts and materials to the three manufacturers, ranging from steel, glass, paint, wheels, tires, batteries, headlights, seats and carpeting, down to smaller items such as plastic trim and sealants.

For Honda, which has more than 40 U.S. suppliers, these purchases add up to roughly $220 million a year, while Nissan's annual purchases from its 88 American suppliers are currently running around $144 million. Comparable data are not available for NUMMI since it is still signing up suppliers, but the joint venture expects to buy parts from about 70 domestic companies, including a number of GM divisions.

The major components sourced from Japan are engines, transmissions and differentials or transaxles -- powertrain products the three companies say they cannot cost effectively manufacture here at current or near-term production levels. (Honda, however, is studying the possibility of building a car engine plant.) These purchases produced a bulge in U.S. parts imports from Japan in both 1983 and this year, and they will continue to do so as Honda, Nissan and GM-Toyota expand output and Mazda gears up its planned factory. At the same time, though, a number of production parts now brought in from Japan will be replaced by domestically sourced products as the companies, which are, after all, still new to the U.S. manufacturing scene, identify additional American suppliers that meet their quality, price and delivery requirements.

This prospect is all but ignored by American parts producers, which have been quick to lash out at the domestic content of Honda, Nissan and NUMMI vehicles. Their harshest criticism, however, is reserved for the fact that the three companies buy components from some of the 27 U.S. manufacturing plants set up by Japanese automotive parts manufacturers (see Table 4). It seems to make no difference to the critics that Japanese-affiliated U.S. parts suppliers represent a minority of the trio's domestic suppliers (five of Honda's and six of Nissan's) or that these firms are creating jobs in the United States that might have remained in Japan if Honda, Nissan or GM-Toyota had opted instead to import the relevant parts.

What really worries American parts makers, it appears, is the possibility that Japanese rivals that begin manufacturing here to supply one of the Japanese vehicle assembly operations will start to go after U.S. Big Three contracts. While this concern is understandable, criticism of the current production parts purchasing policies of Honda, Nissan and GM-Toyota is not. Over time, OE contracts with these companies and later with Mazda could give domestic manufacturers their best chance to break into the dealer-controlled replacement parts market for Japanese cars and trucks.

For further information, contact Susan MacKnight.

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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JEI Report will not be published on December 28 or January 4 because of the Christmas and New Year's holidays. The next issue will appear January 11, 1985.

Table 1: U.S. Trade in Motor Vehicle Parts and Accessories, 1980-84

(in thousands of dollars; exports f.a.s. value, imports Customs value basis)

	1980	1981	1982	1983	Nine Months 1983	Nine Months 1984
Overall Trade Balance						
Total Exports	$9,307,157	$11,261,660	$10,641,745	$11,045,088	$8,007,373	$10,377,556
Total Imports	9,025,010	8,447,409	9,112,226	12,597,206	8,828,783	12,792,906
Trade Balance	282,147	2,814,251	1,529,519	-1,552,118	-821,410	-2,415,350
U.S.-Japan Trade Balance						
Exports to Japan	105,209	118,991	127,847	148,368	104,277	130,659
Imports from Japan	2,828,725	1,821,699	1,822,344	2,112,954	1,489,535	2,247,708
Trade Balance	-2,723,516	-1,702,708	-1,694,497	-1,964,586	-1,385,258	-2,117,049
Major Export Markets						
Canada	5,119,372	6,194,440	6,382,881	7,722,027	5,538,512	7,321,913
Mexico	1,377,352	1,904,878	1,115,443	764,725	534,746	963,077
Venezuela	392,010	536,269	524,329	278,384	210,111	305,501
West Germany	156,795	221,238	226,741	219,880	166,099	177,228
United Kingdom	190,198	210,359	196,209	200,293	149,534	172,562
Australia	209,274	237,944	223,673	153,499	113,571	168,312
Saudi Arabia	158,770	223,230	266,011	225,365	180,717	157,585
Japan	105,209	118,991	127,847	148,368	104,277	130,659
Belgium	140,547	115,108	135,357	124,750	85,479	72,230
France	n.a.	n.a.	118,764	92,096	68,701	70,831
Major Import Suppliers						
Canada	3,379,057	3,896,053	4,524,980	6,568,970	4,612,220	6,530,904
Japan	2,828,725	1,821,699	1,822,344	2,112,954	1,489,535	2,247,708
Mexico	310,339	418,957	648,003	1,207,665	814,478	1,150,043
West Germany	797,327	586,035	506,679	631,396	452,423	647,417
Brazil	222,706	247,426	310,457	424,085	283,781	452,347
France	453,734	390,211	294,501	323,594	232,791	345,928
United Kingdom	299,852	260,871	189,526	232,457	166,099	271,738
Korea	120,313	163,625	189,234	254,088	178,305	254,619
Taiwan	110,084	118,120	133,820	248,446	175,694	247,202
Italy	140,098	147,523	123,524	130,708	98,891	138,249

Source: U.S. International Trade Commission, unpublished data

Table 2: U.S. Exports of Motor Vehicle Parts and Accessories to Japan, 1979-84

(in thousands of dollars, f.a.s. value basis)

	1979	1980	1981	1982	1983	Nine Months 1983	Nine Months 1984
Total	n.a.	$105,209	$118,991	$127,847	$148,368	$104,277	$130,659
Bodies	$344	0	350	260	266	200	135
Chassis	466	1,074	106	106	84	0	79
Axles	n.a.	n.a.	438	1,025	9,696	7,824	1,549
Body Stampings	255	284	107	124	93	67	229
Bumpers	215	83	162	0	0	0	52
Wheels	850	962	620	1,196	1,107	1,044	812
Hubcaps and Wheel Covers	97	71	227	0	0	0	19
Radiators	208	77	366	319	277	0	61
Mufflers and Tailpipes	111	108	0	0	0	0	220
Brakes and Parts	3,506	4,545	4,275	3,832	4,487	3,193	5,402
Shock Absorbers	428	617	678	510	793	486	823
Transmissions	15,047	17,955	17,301	16,316	18,775	13,580	16,115
Parts Not Listed Above	27,751	33,678	32,179	31,678	33,585	22,671	52,586
Engines	231	469	1,354	1,191	1,350	556	2,365
Engine Parts	4,852	18,704	26,873	32,479	38,036	26,195	22,710
Ignition Wiring Sets*	425	554	698	696	640	230	546
Starter Motors	101	105	189	487	505	323	259
Spark Plugs	1,060	1,149	760	920	618	298	511
Points	0	0	0	0	0	0	8
Battery Chargers	189	141	214	245	117	0	343
Lead-Acid Storage Batteries*	776	1,067	1,488	1,513	2,007	1,434	1,808
Voltage Regulators*	65	93	137	112	82	54	127
Other Starting and Ignition Equipment	852	906	587	900	631	457	568
Lighting Equipment	458	350	395	507	272	199	212
Sealed Beams	1,561	2,326	2,592	4,186	4,314	3,334	2,902
Signaling Equipment	210	417	0	0	0	0	45
Pumps	252	857	552	243	156	112	242
Fans and Blowers	0	0	73	0	70	70	5
Air Conditioners	3,398	3,126	2,965	1,040	1,114	877	451
Air Conditioner Compressors	n.a.	n.a.	n.a.	91	115	88	67
Springs and Leaves	0	0	0	0	0	0	8
Hinges and Other Hardware	719	610	529	575	658	433	522
Locks	0	0	0	0	0	0	3
Furniture*	1,301	603	2,179	2,729	1,196	1,002	1,709
Tempered Glass	179	350	138	120	81	65	86
Laminated Glass	0	1,091	3,096	3,530	5,226	3,203	6,387
Mirror Glass	0	0	0	0	0	0	17
Radios	457	839	0	139	123	77	377
Tires	8,047	6,147	11,039	12,295	11,034	8,339	6,167

*Not all necessarily for motor vehicles.

Source: U.S. Department of Commerce, Bureau of the Census, U.S. Exports: Schedule E Commodity by Country (FT 410)

Table 3: U.S. Imports of Motor Vehicle Parts and Accessories from Japan, 1979-84

(in thousands of dollars, Customs value basis)

	1979	1980	1981	1982	1983	Nine Months 1983	Nine Months 1984
Total	n.a.	$2,828,725	$1,821,699	$1,822,344	$2,112,954	$1,489,535	$2,247,708
Compact Truck Bodies (incl. cabs)	$123,209	206,923	31,339	20,291	9,296	7,977	11,982
Other Bodies	796	2,989	0	674	302	68	20,661
Compact Truck Chassis	1,286,627	1,237,310	0	0	0	0	564
Other Chassis	3,133	7,248	0	1,235	4,001	2,285	7,201
Body Stampings	48,885	55,178	67,544	69,235	69,689	50,914	69,480
Bumpers	15,743	14,678	16,307	18,127	18,885	13,836	22,840
Axle Spindles	0	0	0	5,771	703	208	16,166
Wheels	5,817	5,710	7,614	7,935	15,204	8,951	19,539
Hubcaps and Wheel Covers	1,412	1,075	1,993	980	1,873	1,148	2,378
Radiators	3,001	2,992	3,770	4,754	4,446	2,779	7,705
Mufflers and Tailpipes	15,006	10,669	10,561	9,569	17,322	12,081	12,853
Brakes and Parts	15,489	18,882	25,263	25,332	31,466	22,515	31,073
Shock Absorbers	6,283	6,844	11,152	12,199	15,538	11,026	16,708
Transmissions	29,313	36,405	44,513	81,671	122,957	86,678	96,797
Parts Not Listed Above	213,983	197,217	268,536	274,069	356,917	241,067	458,064
Diesel Engines	18,086	9,511	31,945	22,845	12,448	9,674	18,316
Gasoline Engines	2,105	87,788	106,598	116,795	66,460	40,539	103,202
Engine Parts	139,406	118,455	142,331	107,331	117,559	88,645	116,513
Ignition Wiring Sets*	2,525	2,890	3,312	4,331	6,486	3,470	9,105
Starter Motors	16,950	16,459	23,571	19,486	25,958	18,151	28,280
Spark Plugs	13,461	16,216	13,674	15,638	18,164	13,429	18,278
Points	4,728	4,625	3,637	2,392	2,449	1,895	2,085
Battery Chargers	7,184	7,158	8,424	8,486	10,468	6,809	13,479
Lead-Acid Storage Batteries*	15,107	12,736	11,372	12,786	14,751	10,620	14,474
Voltage Regulators*	3,483	3,216	4,218	4,588	4,693	3,529	6,464
Other Starting and Ignition Equipment	23,140	26,313	27,081	25,440	31,100	21,455	35,902
Speedometers and Tachometers*	15,277	11,303	13,733	11,069	14,934	10,385	18,126
Lighting Equipment	27,013	25,796	26,136	28,646	34,176	25,049	33,137
Sealed Beams	1,568	2,030	1,412	1,075	904	689	668
Pumps	14,100	15,156	20,754	16,610	22,608	15,913	26,150
Fans and Blowers	2,361	3,992	4,746	10,735	4,491	3,523	4,632
Air Conditioners and Parts	n.a.	n.a.	n.a.	n.a.	51,207	35,890	50,826
Air Conditioner Compressors	n.a.	n.a.	n.a.	39,464	70,610	46,400	77,836
Springs and Leaves	9,945	4,699	6,435	4,707	9,292	5,535	12,680
Hinges	4,604	6,899	8,238	9,464	14,315	9,480	19,438
Locks	2,041	2,627	2,860	3,237	3,318	2,283	3,959
Furniture	5,389	6,384	7,794	9,743	11,189	6,891	13,030
Tempered Glass*	4,152	6,936	7,117	8,070	8,271	6,245	10,774
Laminated Glass	1,652	2,479	2,584	2,788	3,554	2,544	5,128
Radios	42,864	45,483	36,442	34,387	27,769	19,167	30,545
Radio-CB Combinations	2,828	1,911	300	173	268	219	104
Tape Players	34,276	27,691	50,977	48,415	61,934	45,934	43,777
Radio-Tape Player Combinations	328,774	288,476	384,959	341,324	356,472	261,861	343,398
Tires	159,126	214,345	302,805	309,985	343,026	241,608	322,673

*Not all necessarily for motor vehicles.

Source: U.S. Department of Commerce, Bureau of the Census, U.S. Imports for Consumption and General Imports (FT 246)

Table 4: U.S. Production of Motor Vehicle Parts and Accessories by Japanese-Affiliated Companies

Company	Parent	Share	Plant Location	Year Operational	Product Line	Comments
Bellemar Parts Industries Inc.	Honda Motor Co., Ltd. Sankei Giken Kogyo Co., Ltd. Tokyo Seat Co., Ltd.	80 10 10	Marysville, OH	1982	Seat assemblies, exhaust systems, catalytic converters, brake lines, wheels and door sashes	Honda of America Mfg. Inc. supplier. Building new plant in Russells Point, Ohio. When factory completed in mid-1985, production of exhaust systems, catalytic converters, brake lines and door sashes will be transferred from Marysville facility.
Bridgestone Tire Manufacturing (U.S.A.), Inc.	Bridgestone Corp.	100	LaVergne, TN	1982	Radial tires for heavy-duty trucks and buses	Sells primarily in replacement market. Been manufacturing tires for sale under Bridgestone name since March 1984 in addition to making tires for Firestone Tire & Rubber Co. Production of car tires under consideration.
Calsonic, Inc.	Nihon Radiator Co., Ltd.	100	Irvine, CA	1976	Air conditioning systems	OE for vehicles sold through Nissan Motor Corp. U.S.A.
Calsonic Manufacturing Corp.	Nihon Radiator Co., Ltd.	100	Shelbyville, TN	1983	Air conditioning systems and exhaust assemblies	OE supplier to Nissan Motor Mfg. Corp. U.S.A.
Cast Forge Co.	Nippon Light Metal Co., Ltd. Kelsey-Hayes Co.	20 80	Howell, MI	1982	Aluminum wheels, transmission component parts and engine parts	Output goes to OE makers.
Clarion Corp. of America	Clarion Co., Ltd.	100	Lawndale, CA Nashville, TN	1971 1983	Radio combinations	Supplying Chrysler Corp. and Nissan Motor Mfg. Corp. U.S.A. on OE basis. Also sells to automotive dealers and in replacement market.
*Curtis-Maruyasu America, Inc.	Maruyasu Industries Co., Ltd. Curtis Products, Inc.	50 50	Tracy, CA	1985	Fuel line and hydraulic brake assemblies	Will be OE supplier to New United Motor Mfg. Inc. Plant completed but will not be operational until 1985.
*Eaton Auto Products Manufacturing Inc.	Nihon Plast Co., Ltd.	100	Eaton, OH	1985	Steering wheels	Will be OE supplier to Honda of America Mfg. Inc. Also hopes to win contracts from Nissan Motor Mfg. Corp. U.S.A. and U.S. Big Three auto makers.
Fuji Koki America Inc.	Fuji Koki Mfg. Co., Ltd.	100	Dallas, TX	1982	Expansion valves for air conditioning systems	OE supplier to U.S. manufacturing affiliates of Japanese companies as well as American producers. Originally set up as joint venture with Virginia Chemicals Inc. and called Pace Products Inc. Fuji Koki became sole owner spring 1984. New plant opened June 1984.

Company	Parent	Share	Plant Location	Year Operational	Product Line	Comments
Hi-Lex Corp.	Nippon Cable System, Inc.	100	Battle Creek, MI	1978	Control cables for accelerators, clutches, hood and trunk release mechanisms, gas filler lids and brakes	Has OEM contracts with General Motors Corp., Ford Motor Co., Chrysler Corp., International Harvester Co. and Nissan Motor Mfg. Corp. U.S.A. Some output also goes to replacement market. Doubled production capacity spring 1984 and again fall 1984.
Izumi Corp.	Izumi Motor Co., Ltd.	100	Yaphank, NY	1979	Steering wheels and horn pad assemblies	OE supplier to Ford Motor Co., Chrysler Corp. and Nissan Motor Mfg. Corp. U.S.A. Volume quadrupled in 1984. Expects to start construction July 1985 of urethane manufacturing facility that will allow company to expand product line.
*KTH Parts Industries Inc.	Kikuchi Press Kogyo Co., Ltd. Takao Kinzoku Kogyo Co., Ltd. Hirata Press Kogyo Co., Ltd. Hongo Seisakusho Co., Ltd.	n.a. n.a. n.a. n.a.	St. Paris, OH	1985	Stamped and welded internal structural components	Output will go exclusively to Honda of America Mfg. Inc. Plant expected to be operational fall 1985.
*Kantus Corp.	Kanto Seiki Co., Ltd.	100	Lewisburg, TN	1985	Plastic instrument panels, radiator grilles, console boxes and front bumpers	Will be OE supplier to Nissan Motor Mfg. Corp. U.S.A. Plant expected to be operational mid-1985.
*Musashi USA Inc.	Musashi Precision Industry Co., Ltd.	100	Battle Creek, MI	1985	Arm bushing and joint assemblies	All of output will go to Ford Motor Co. under OE contract after plant goes in operation in spring 1985.
NGK Spark Plug Mfg. (U.S.A.), Inc.	NGK Spark Plug Co., Ltd.	100	Irvine, CA	1977	Spark plugs	Output goes into replacement market for Japanese-made cars and compact pickups. Moved operations from Van Nuys to Irvine in spring 1983.
NOK Inc.	Nippon Oil Seal Industry Co., Ltd.	100	LaGrange, GA	1980	Oil and mechanical seals	Has OE contracts with General Motors Corp., Ford Motor Co., Chrysler Corp., American Motors Corp. and International Harvester Co. Also supplies replacement market. Plant capacity being doubled.
Nippondenso of Los Angeles Inc.	Nippondenso Co., Ltd.	100	Long Beach, CA	1971	Air conditioning systems	Has OE contract with New United Motor Mfg. Inc. Continues to make systems for Toyota Motor Corp. and Honda Motor Co., Ltd. vehicles sold here. Also remanufactures starters and alternators. Recently moved production from Carson to new plant in Long Beach.

Company	Parent	Share	Plant Location	Year Operational	Product Line	Comments
Nippondenso Sales Inc.	Nippondenso Co., Ltd.	100	Battle Creek, MI	1983	Windshield washers and heaters	Output goes to Honda of America Mfg. Inc. Will start construction in March 1985 of new plant in Battle Creek for production of heat exchangers, condensers and evaporators for AC systems. New facility expected to be operational mid-1986.
North American Lighting Inc.	Koito Manufacturing Co., Ltd. Westfalische Metall Industrie AG	49 51	Flora, IL	1983	Front and park lamps, rear combination lamp assemblies, fog lamps and license-plate lamps	OE supplier to Nissan Motor Mfg. Corp. U.S.A., BMW of North America Inc., Volkswagen of America, Inc., Ford Motor Co., General Motors Corp., Chrysler Corp. and American Motors Corp. Just opened new production facility. Will add high-mounted stop lamps to line in spring 1985.
Sanden International (USA), Inc.	Sanden Corp.	100	Dallas, TX	1980	Air conditioner compressors	Sells in both OE market and aftermarket to both American manufacturers and U.S. manufacturing affiliates of Japanese companies. Plans to add evaporator coils to production line in 1985.
Stanley Electric U.S. Co., Inc.	Stanley Electric Co., Ltd.	100	London, OH	1982	Front and rear combination lamp assemblies	OE supplier to Honda of America Mfg. Inc.
Toyota Motor Mfg., U.S.A., Inc.	Toyota Motor Corp.	100	Long Beach, CA	1974	Cargo beds for pickup trucks	OE supplier to Toyota Motor Sales U.S.A. Inc. Beds shipped to eight Toyota port facilities around United States where they are mounted on imported cab-chassis units. Plant recently turned out one millionth bed.
Tri-Con Industries, Ltd.	Tokyo Seat Co., Ltd.	100	Columbia, MO	1983	Car seats	Has OE contract with Chrysler Corp. Also has car seat sewing plant in Cape Girardeau. Expects to open new plant in Lincoln, Nebraska spring 1985 to stamp frames for car seats.
Viam Manufacturing Inc.	Japan Vilene Co., Ltd. Dainippon Ink & Chemicals Inc.	60 40	Santa Fe Springs, CA	1984	Floor mats	Sold in both OE and replacement markets.
*Warner-Ishi Corp.	Ishikawajima-Harima Heavy Industries Co., Ltd. Borg-Warner Corp.	50 50	Shelbyville, IL	1985	Turbocharger housings	OE and aftermarket supplier.
Wynn-Kiki Inc.	Diesel Kiki Co., Ltd. Wynn Industries, Inc.	50 50	Fort Worth, TX	1984	Air conditioner compressors	Sells primarily in OE market to both American manufacturers and U.S. manufacturing affiliates of Japanese companies. Some sales of replacement parts. Plans to add evaporators to production line in 1985.

*Under construction

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JEI

REPORT

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Outlook for Reagan-Nakasone Meeting

Speculation is rampant in Washington as President Reagan and Prime Minister Yasuhiro Nakasone prepare for their January 2 meeting in California. Interest centers on the specific issues they might tackle and the depth of any agreements that might result. At this point, it appears that the sessions will fall under the "working meeting" label, providing some room for discussions over particulars in U.S.-Japan trade and political relations, but not enough to reach agreement on many issues that are sore points with U.S. trade negotiators.

The prime minister and president first met face-to-face in January 1983, when Mr. Nakasone journeyed to Washington in a wave of anticipation and publicity. He preceded his call on Mr. Reagan with an announcement that Japan would lift its ban on exports of dual-use technologies to the United States to enhance exchanges that would have both commercial and military applications.

STATISTICAL SUPPLEMENT

Trade and Payments Data
(in millions of dollars unless otherwise indicated)

	1982	1983	January-October 1983	January-October 1984	August 1984	September 1984	October 1984
Japan's Balance of Payments							
Trade Balance	$ 18,079	$ 31,454	$25,670	$35,454*	$ 2,221*	$ 5,220*	$ 4,504*
Exports (f.o.b.)	137,663	145,468	118,384	138,891*	13,178*	14,484*	14,778*
Imports (f.o.b.)	119,584	114,014	92,714	103,437*	10,957*	9,264*	10,274*
Current Account Balance	6,850	20,799	16,792	27,466*	1,231*	4,348*	3,889*
Long-Term Capital (net)	-14,969	-17,700	-14,471	-36,662*	-3,183*	-2,189*	-4,021*
Overall Balance	-4,971	5,177	3,062	-11,929	-3,435	2,777	-274
International Reserves (end of period)	23,262	24,496	24,665	25,702	25,428	25,444	25,702
Japan's Customs Clearance Trade							
Trade Balance	6,900	20,534	16,389	25,914*	1,113	4,493	3,586*
Exports (f.o.b.)	138,831	146,928	119,296	140,181*	13,314	14,644	14,896*
Cars	18,015	19,535	16,113	18,266*	1,564	1,855	1,834*
Steel	15,645	12,843	10,432	11,298*	1,120	1,207	1,214*
Imports (c.i.f.)	131,931	126,393	102,908	114,266*	12,201	10,150	11,310*
Crude Oil	46,274	40,063	32,241	32,982*	3,701	2,650	3,079*
Japan-U.S. Trade							
Trade Balance	12,151	18,181	13,993	26,756*	2,438	3,311	3,230*
Exports (f.o.b.)	36,330	42,829	34,144	49,223*	4,848	5,346	5,508*
Imports (c.i.f.)	24,179	24,648	20,151	22,467*	2,410	2,034	2,278*
Yen-Dollar Exchange Rate							
Tokyo Spot Market (end of period)	Y235.00	Y232.20	---	---	Y241.30	Y245.50	Y245.25
U.S.-Japan Trade							
Trade Balance	-16,778	-19,289	-15,637	-29,108	-3,179	-3,172	-3,203
Exports (f.a.s.)	20,966	21,894	17,714	19,289	1,906	1,768	1,872
Industrial Supplies	9,173	8,734	7,062	7,447	731	689	728
Food and Feed	4,971	5,555	4,583	4,962	534	468	384
Capital Goods	4,434	5,116	3,994	4,578	418	385	514
Consumer Goods	1,356	1,394	1,171	1,245	129	130	130
Imports (Customs)	37,744	41,183	33,351	48,397	5,085	4,940	5,075
Automotive Products	12,890	14,919	12,077	15,653	1,604	1,471	1,538
Industrial Supplies	6,795	5,391	4,384	6,193	625	624	650
Consumer Goods	7,842	8,296	6,691	9,549	1,055	1,006	1,083
Capital Goods	9,530	11,896	9,632	16,300	1,734	1,773	1,723

*Preliminary

STATISTICAL SUPPLEMENT

Japanese Economic Indicators

(percentage change from year-earlier period unless otherwise indicated)

	1982	1983	January-September 1983	January-September 1984	July 1984	August 1984	September 1984
Discount Rate (end of period)	5.5%	5.0%	5.5%	5.0%	5.0%	5.0%	5.0%
Outstanding Money Supply	9.2%	7.4%	7.4%	7.8%	7.7%	7.7%	8.1%
Industrial Production	0.3%	3.6%	1.8%	11.3%	12.8%	11.0%	8.6%
Manufacturing Operating Rate	-2.9%	1.6%	-0.3%	9.1%	9.6%	8.8%	5.8%
Number of Bankruptcies	-2.8%	11.9%	10.4%	12.1%	14.3%	4.7%	-3.6%
Residential Construction Starts	-0.5%	-0.8%	-1.5%	4.4%*	6.3%	4.3%	3.8%*
Job Openings to Applications (ratio)	0.61	0.60	0.59	0.64	0.64	0.64	0.64
Nominal Wages	4.5%	3.5%	3.8%	4.4%	4.0%	3.5%	4.5%
Labor Productivity	1.0%	4.6%	1.8%**	10.7%**	11.6%	n.a.	n.a.
Wholesale Prices	1.8%	-2.2%	-1.9%	-0.5%	0.0%	0.2%	0.3%
Consumer Prices	2.7%	1.9%	1.9%	2.2%	2.6%	1.9%	2.3%
Yen-Based Export Prices	3.9%	-6.0%	-5.9%	-0.1%	1.7%	1.1%	1.7%
Yen-Based Import Prices	7.9%	-7.8%	-6.0%	-4.4%	-2.1%	-3.5%	-3.1%

*Preliminary

**Through July of each year only.

For Japan's most recent GNP figures, see JEI Report No. 47B, December 14, 1984.

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Nakasone Pledges Further Market Access Efforts in Meeting with Reagan

Despite this country's ballooning trade deficit with Japan, most top government officials in Washington and Tokyo had expected the January 2 Los Angeles meeting between Prime Minister Yasuhiro Nakasone and President Reagan to be devoted at least equally to international matters, particularly the then-upcoming U.S.-U.S.S.R. arms control talks, and bilateral trade problems. To the surprise of these policymakers, the familiar issue of U.S. access to the Japanese market dominated the fifth round of discussions between the two leaders.

Prime Minister Nakasone may have sought an early meeting with President Reagan for that purpose, among others. Although he personally may be committed to the goal of market liberalization, the Japanese leader does not necessarily have the political influence to force the bureaucracy to make the concessions needed to satisfy that goal. At the same time, though, his support for market liberalization adds to the pressure on the Japanese government to fulfill these aims. In a sense, Mr. Nakasone is using his stature as an international leader to achieve domestic policy goals.

On the foreign policy side, the Nakasone-Reagan meeting underscored Japan's growing role in international policy circles and reminded that audience of Japanese interests. By continuing the pattern established at the outset of his administration, Mr. Nakasone is enabling the nation to play a more prominent role in world politics and encouraging other countries to include Japan in the policymaking process.

Michael Chinworth

Japanese Government Sees 4.6 Percent GNP Growth in FY 1985

Resurgent domestic demand tempered by reduced export expansion forms the basis for the Japanese government's fiscal 1985 (April 1, 1985 to March 31, 1986) economic growth forecast. A moderate 4.6 percent increase is predicted in real gross national product (GNP) -- down from FY 1984's projected 5.3 percent gain but still higher than initial growth forecasts for FY 1983.

According to Economic Planning Agency (EPA) analysts, domestic demand will power the economy, accounting for 4.1 percentage points of total GNP growth versus an estimated 4 points this fiscal year. Investment in capital equipment by businesses is expected to remain solid but will fall short of FY 1984's double-digit rate (see accompanying tables). Improved consumer spending should also bolster growth, based on an improved psychological environment. However, wage increases are expected to be only slightly more generous than this year's, and employment growth could be restrained, preventing any surge in personal consumption. The optimistic outlook for residential construction is somewhat at odds with this sector's recent performance, although declining interest rates and improved consumer confidence may indeed herald better times. The inflation rate is predicted to be slightly higher than in the current fiscal year due to increased economic activity, but it will remain at low levels by industrial country standards because of weak world commodity prices, especially for energy resources.

The agency's outlook for a weak net external sector (contributing just 0.5 percentage points to overall GNP growth) hinges on its expectations that exports in yen terms will only expand 6.1 percent, far below FY 1984's anticipated 14.6 percent gain. Import growth may actually exceed export growth for the first time since FY 1978. Nonetheless, Japan's merchandise trade surplus is expected to remain at FY 1984's projected record $44 billion level. No change is seen in the current-account surplus either, with the deficit in services trade holding steady at $10 billion. The outflow of long-term capital is expected to continue, reaching $40 billion, slightly less than FY 1984's $45 billion.

Government FY 1985 Forecast for the Japanese Economy

(percentage change)

	Actual			Estimated	Projected
	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985
Real GNP	5.8%	5.0%	4.2%	5.3%	4.6%
Consumer Spending	5.6	7.1	4.7	3.1	4.1
Residential Construction	2.1	2.8	8.9	3.1	3.8
Capital Spending	3.9	1.3	3.5	10.1	8.5
Current Account Surplus*	$5.9	$9.1	$24.2	$34.0	$34.0
Merchandise Trade Surplus*	$20.4	$20.1	$34.5	$44.0	$44.0
Exports (in yen terms)	10.9%	-9.1%	10.8%	14.6%	6.1%
Imports (in yen terms)	0.8	-10.4	0.3	10.6	7.6
Wholesale Prices	1.3	1.0	-2.3	0.3	1.1
Consumer Prices	4.0	2.4	1.9	2.4	2.8
Unemployment Rate	2.2%	2.5%	2.7%	2.8%	2.7%

*in billions of dollars

Summary of Private Forecasts for FY 1985

(percentage change)

	Real GNP	Consumer Spending	Capital Spending	Exports	Current Account Surplus*	Y/$ Exchange Rate
Dai-Ichi Kangyo Bank	4.2%	4.0%	8.1%	6.5%	$44.8	Y230
Fuji Bank	4.2	3.8	6.2	6.3	38.0	233
Mitsubishi Bank	5.1	4.2	9.5	6.4	34.0	243
Sanwa Bank	4.5	3.7	8.1	7.4	47.0	235
Mitsui Bank	4.4	3.8	7.9	5.5	40.0	232.5
Taiyo Kobe Bank	4.2	3.9	7.4	5.4	36.0	n.a.
Tokai Bank	3.6	3.6	5.9	4.1	39.5	n.a.
Bank of Tokyo	4.6	n.a.	n.a.	6.9	45.0	220
Nomura Research Institute	4.0	3.9	6.0	5.7	39.4	231
Daiwa Economic Research Institute	4.6	3.8	5.3	9.7	40.2	231
Nikko Research Center	4.1	3.3	6.2	5.1	35.9	230
Yamaichi Economic Research Institute	4.3	3.9	5.7	6.3	45.1	237.5
Mitsubishi Research Institute	3.8	2.4	4.9	8.4	46.6	250
Research Institute of the National Economy	6.0	4.1	11.9	7.4	42.6	230

*in billions of dollars

A number of private forecasters have also presented FY 1985 outlooks. Most of these assume that the Bank of Japan's discount rate will remain at 5 percent; budget outlays will continue to be restrained; and no major tax reform is in the offing. These common assumptions aside, there is a fairly wide range of views on real growth rates (3.6 percent to 6.0 percent) and current-account surpluses ($36 to $47 billion) (see accompanying table). The primary factors leading to differences among forecasters are the variations in the growth of capital spending and exports, reflecting uncertainties about the prospects for foreign economies, particularly the United States'. One train of thought sees the U.S economy settling into a pattern of moderate, steady growth, translating into good export markets and 4-percent-plus growth at home. Other analysts are more pessimistic, predicting stagnation, if not recession, in the U.S. economy and therefore sharply reduced exports and business investment at home.

Another area of uncertainty is the strength of the dollar. Most forecasters are hedging their bets this year by widely bracketing the yen's average annual exchange rate from Y230=$1.00 to Y250=$1.00. The dollar has been unusually volatile over the past year, often embarrassing forecasters. The general view is that the dollar is unrealistically high at the moment, presenting the risk of a rapid fall as U.S. economic growth and interest rates moderate.

Despite Commerce Department estimates of renewed U.S. growth, the Japanese are uneasy. Prime Minister Nakasone will continue to pursue policies that emphasize domestic demand as the economy's engine. With fiscal restraint still in effect, Mr. Nakasone is banking on deregulation of markets and promotion of private initiatives to invigorate the domestic economy. The changes he is seeking, however, will be difficult to achieve and slow in coming. In the meantime, the Japanese economy will continue to rely heavily on an active global economy for momentum.

Jon Choy

Japan's FY 1985 Budget Draft Signals More Belt-Tightening

On December 24, the cabinet of Prime Minister Yasuhiro Nakasone approved the Ministry of Finance's draft budget for the fiscal year starting April 1, 1985. Austerity will be the spending watchword for the third year in a row. Expenditures will total just under Y52.5 trillion ($214.3 billion at Y245=$1.00), a 3.7 percent increase over FY 1984's initial budget. It may appear that Mr. Nakasone heeded calls from some quarters of the Liberal Democratic Party (LDP) for a stimulative fiscal policy since the FY 1985 budget increase is far in excess of the 0.5 percent rise set for the current fiscal year. Discretionary spending (total outlays less debt service costs and transfers to local governments), however, has been pushed below the FY 1984 level: Y32,585,405 million versus Y32,585,741 million. In addition, the shrinking budget pie continues to be reapportioned in line with Mr. Nakasone's free market and pro-defense philosophies.

Budget winners and losers are evenly divided, with social welfare (up 2.4 percent), defense (rising 6.9 percent), economic cooperation, including official development assistance (gaining 7.8 percent), and energy-related prospects (expanding 4.2 percent) getting the thumbs-up. A 14.5 percent cut in

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Nakasone Issues Qualified Support for "Star Wars" Initiative

Prime Minister Yasuhiro Nakasone, who has expressed his "understanding" of President Reagan's Strategic Defense Initiative (SDI) -- the so-called "Star Wars" strategy -- may have embroiled himself in another defense-related controversy at home. The issue is a further example of Japan's sensitivity to the collective security debate, including domestic defense spending and the use of its technology in advanced weapons systems.

American officials have sought allied support for SDI to give the program credibility at home and negotiating leverage with the Soviets. Mr. Nakasone has neither condemned nor embraced it. His hesitance may stem from popular fears that backing the program will ultimately translate into direct Japanese involvement, another step toward what many defense critics see as an increasingly prevalent pattern linking Japan with U.S. defense and security concepts. The Japan Socialist Party (JSP) has been particularly critical of

The Yen: A Look Backward and Forward

The yen-dollar exchange rate is one rough spot in U.S.-Japan relations that has resisted the best ameliorative efforts of policymakers. Last year was no exception, and the outlook for 1985 is no better despite the much-hailed yen-dollar agreement signed last summer. The root of the problem is that the exchange rate is determined by a multitude of factors, many of which are beyond the control of either government.

The first half of 1984 was characterized by the yen's advance and subsequent retreat against the dollar. The yen had gained 4.3 percent over its initial 1984 rate by the end of March. By the end of June, however, it had surrendered its gains and then some (see table). The causes of the first-quarter surge were not wholly economic: the resurgence of the U.S. economy combined with sluggish Japanese growth should have driven the yen down. Speculators apparently bet that the dollar was at unsustainably high levels in early 1984 and moved into yen, pushing it up. As the U.S. economy continued to barrel along at 7 to 10 percent quarterly growth rates, it became increasingly clear that the speculators had guessed incorrectly, and the weight of economic forces drove the yen down.

The dollar's upward march against the yen continued throughout the second half of 1984 with almost no pause. In fact, many traders began to speculate against the yen as U.S. long- and short-term interest rates remained far above those obtainable in Japan. The dollar moved up sharply in July, and then held steady for several months before making another big advance in December. The year ended with the dollar worth Y251.10, Y17.50 or 7.5 percent more than on 1984's first trading day.

Japanese officials found the yen's erosion uncomfortable at best, even though they were correct in attributing it to high U.S. interest rates and import-hungry American consumers -- both factors beyond Tokyo's control. Japan was not alone in experiencing a weakening currency. In fact, the yen was the most stable of the major currencies. On New York's interbank spot market, the West German mark and French franc lost over 13 percent during 1984, the lira 14 percent, the Swiss franc 16 percent, the British pound 20 percent and the Canadian dollar 39 percent (see table). The return of solid growth in the Japanese economy, in contrast with other industrial countries, blunted the dollar's upward motion.

More worrisome in Japanese monetary officials' eyes was the volatility of the Tokyo exchange markets, particularly in November and December. Day-to-day changes of a full yen or more became almost commonplace in the last months of 1984. The swings were not caused by heavy speculation, as daily trading volumes were moderate in November and light in December, but by uncertainties about the direction of the U.S. economy and interest rates. (December's light trading did amplify slight changes, however.) The Bank of Japan constantly stated its willingness to intervene in the marketplace when things threatened to get out of hand and consistently backed its warning with action.

Monthly Yen-Dollar Exchange Rates* and Average Daily Trading Volumes, 1984

(in yen per dollar and millions of dollars)

	Rate	Volume		Rate	Volume
January	Y234.8	$1,030	July	Y245.5	$1,671
February	233.5	1,130	August	241.3	1,421
March	224.7	1,820	September	245.5	1,510
April	226.0	1,240	October	245.3	1,525
May	231.5	1,712	November	246.3	1,452
June	237.5	1,677	December	251.1	1,088

*End-of-month quotation on the Tokyo interbank spot market.

Foreign Exchange Rates*, 1984

(in units of foreign currency per dollar)

	December 30 1983	January 1 1984	December 31 1984	January 1 1985
British pound	0.6875	0.7010	0.8627	0.8703
Canadian dollar	0.8031	0.8023	1.3200	1.3222
French franc	8.3375	8.4700	9.6250	9.7050
Italian lira	1656.50	1678.00	1933.00	1947.00
Japanese yen	231.60	233.75	251.40	251.75
Swiss franc	2.1800	2.2185	2.6000	2.6180
West German mark	2.7280	2.7650	3.1500	3.1730

*Close-of-day quotation on the New York interbank spot market.

Japanese monetary officials have also supported the 1984 yen-dollar agreement with both words and actions, even if not to the complete satisfaction of the Reagan administration. The pact is aimed at altering the structure of the Japanese monetary system, which Americans claim has been preventing wider use of the yen (see JEI Report No. 22B, June 8, 1984). The U.S. government's expectations have proven to be overly optimistic, and there are even questions about the agreement's ultimate impact. It is still too early to make an assessment, though, especially since the more far-reaching reforms have not yet been implemented. What is clear is that financial flows are the dominant factor in setting exchange rates: last year's staggering U.S. merchandise trade deficit had no visible dampening effect on the dollar's rise. Hence, in focusing on structural factors that influence financial flows, U.S. policymakers are at least pulling the right levers.

The outlook for 1985 remains very cloudy. The majority of analysts see U.S. interest rates and growth moderating by mid-year, reducing the gap between domestic and Japanese long-term interest rates. This scenario envisions the dollar's gradual fall -- a point with which some observers disagree. Noting the volatility of exchange markets last year, these dissenters fear the rapid collapse of the dollar and ensuing chaos. Another vocal minority claims the opposite will happen: the greenback will stay at current levels or even rise. Should the U.S. economy slow down, it is argued, investment opportunities in the United States will still be preferable to those available in other countries. Japan could be the exception to this situation due to its recovering economy. This -- plus help from capital market liberalizations -- should be enough to keep the yen from falling much further. Whether the yen will rise against the dollar is another question, however.

Jon Choy

Financial Market Liberalization Moves Ahead in Japan

Satoshi Sumita, the new governor of the Bank of Japan (BOJ), rang in the new year by pledging to continue liberalizing Japan's capital markets, referring to it as a "natural direction." It appears that the hallmark of his five-year term will be the shepherding of the Japanese financial system through a transition period. He has set himself the task of pursuing rapid financial liberalization while maintaining the stability of the system. The BOJ must also undergo fundamental changes, in his view, which will add to the already gargantuan task.

The Euroyen market, significantly changed in 1984, is scheduled to undergo further reform this year. December issues of Euroyen bonds by foreign entities totalled nearly half of all previous outstanding Euroyen issues. The large increase was a result of measures opening this instrument to foreign companies in December. Seven companies accounted for Y145 billion ($592 million) of the Y177 billion ($722 million) worth of Euroyen bonds offered. An even larger expansion is seen after April 1, 1985 when the credit rating requirement for issuers is lowered to single-A.

The market should also receive a boost when the government implements its early January decision to end the 20 percent withholding tax on Euroyen interest paid to foreigners. U.S. officials argued that the tax made Euroyen offers unattractive, blunting the force of the reforms. While convinced that the tax repeal is unfair to Japanese purchasers (who currently hold the vast majority of outstanding issues), Tokyo agreed to the change in hopes of further spurring the market's development.

The domestic market for foreign-issued yen-denominated bonds has also been very active, with Y90 billion ($367 million) in new issues offered in December. The plan to allow foreign firms to issue convertible yen bonds is generating considerable excitement in a market already riding high since the relaxation of issuance rules for domestic firms last year. The Ministry of Finance (MOF) supports the changes, both because they will make the Tokyo bond market more competitive with established financial centers as well as to provide more flexible financing to corporations.

It is possible that the regulations for foreign firms being drawn up by MOF could be more lenient than those applied to domestic firms. For example, foreign issues may not have to maintain certain dividend levels or follow certain payment practices when the bonds are converted into stock.

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JEI

REPORT

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THE NEW RISING SUN: JAPAN'S OPTOELECTRONICS INDUSTRY

Summary

The optoelectronics industry has taken firm root in Japan and is rapidly extending branches into other sectors of the economy. Drawing on a deep pool of human and financial resources from its parent electronics and optical industries and nurtured by careful government attention, this hybrid scion promises to have a major impact on the country's economic structure and global competitive position. Despite a shift of momentum from the public to the private sector, the U.S. and Japanese governments have crossed swords before over this issue and are likely to do so again, perhaps with increasing frequency. This report examines the development of Japan's newest star and reviews the issues separating the two governments.

Optoelectronics: A Broad Spectrum Industry

Optoelectronics combines elements of the optical and electronics industries, yielding a discipline with broader applications and new capabilities. Although it is one of Japan's youngest industries, rapid growth has put its sales on a par with some established high technology sectors including space and nuclear power. Even if private growth forecasts prove optimistic, the industry should become a major factor in the economy by the turn of the century.

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Optoelectronic applications fall roughly into five areas: telecommunications, instrumentation, manufacturing, information processing and energy.

Telecommunications - This is one of the largest markets for optoelectronics. Based on laser transmitters and light-conducting cables, fiber-optic communications systems possess numerous desirable characteristics: very high per-cable transmission capacity; low signal attenuation; high resistance to electromagnetic interference; good stability under a range of environmental conditions; and low power consumption. High cost is currently the major disadvantage of these systems, although this drawback should vanish by the beginning of the next decade. Companies are working on fiber-optic systems not only for communications but also for use in factories and offices and in airplanes and motor vehicles. The information and computer explosions that are rocking Japan provide a very fertile field for the development and introduction of optoelectronic communications systems.

Instrumentation - As industrial and medical technology advances, the demand for precision instruments grows. Not only is higher resolution required of measurement apparatus, but real-time speeds are also becoming increasingly important. The ability to measure the temperature of molten metal in a furnace accurately and instantaneously has made possible commercial production of new alloys and materials. In addition, laser holography, by generating three-dimensional images of objects to reveal surface and internal stress patterns, is playing a major role in new materials and structural engineering. Laser gyroscopes, which are as sensitive as mechanical ones, have the additional advantage of requiring no moving parts. The trend toward automated factories relies heavily on optoelectronics, not only for high capacity data transmission systems but also for robotic vision and fault detection/quality control systems. Medical applications are on the rise as detection thresholds descend to the parts-per-billion level, laser microsurgery techniques mature, and fiber-optic diagnostic equipment becomes more versatile.

Manufacturing - The new technology has direct manufacturing applications that promise improved productivity. Industrial lasers presently form the backbone of the optoelectronic manufacturing force, but other optical devices are gaining in use, especially in the microelectronics industry. The power, speed and precision of laser cutting tools is put to use in industries ranging from textiles to aerospace. Beside reducing actual cutting time, production can be accelerated since the laser tool produces near-finished components. In addition, less material is wasted, further reducing costs. Laser tools really shine in their ability to handle the super-strong alloys that are important to so many industries. Their unparalleled cutting and drilling capabilities make materials that are otherwise difficult to handle commercially feasible.

In the microelectronics industry, however, the attraction of optoelectronics is not brute force, but rather precision. Whether it be etching microscopic patterns, depositing super-thin coatings, or implanting minute impurities in silicon wafers, optoelectronic machines provide the only practicable answer.

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This is increasingly true as the industry moves to develop submicron-feature chips, multi-layer chips and wafer-scale chips. Excellence in optoelectronics is a critical component of excellence in integrated circuits and thus computers.

Information Processing - Optoelectronics manufacturers are giving increased attention to this application, both in terms of money and manpower. At this time, the most visible uses are the laser scanners used at checkout counters in retail stores, high-speed photocopiers and printers, and high-definition facsimile machines. The bar code/laser scanner combination not only speeds up long supermarket lines but also moves inventory items more rapidly through the transportation, warehousing and assembly steps of the manufacturing process. Railroads have used bar code readers to track rolling stock for almost two decades, and now other industries, including motor vehicles, are adopting these readers in the drive to reduce inventory costs and modernize production processes. Laser printers and copiers could revolutionize the printing industry. Bookstores, for instance, could keep hundreds of thousands of titles in electronic form and print them out on the spot for a customer. Facsimile technology has advanced to the point where the Japan Patent Office plans to accept patent applications via this equipment.

The real thrust of research in the opto-information field, however, is directed at developing building blocks for an optical computer. The theoretical advantages of optical computers are staggering: computational speeds millions of times faster than even the much-heralded "fifth-generation" computers being developed; information storage capacity measured in the gigabyte or terabyte (billions or trillions of computer words) ranges; and the ability to perform calculations in number bases greater than base-2. (Current computers function in base-2 format, in contrast to humans who generally use base-10.) The practical problems facing researchers, however, are equally impressive: how to create light-based logic elements; how to store and retrieve information in light form; how to coordinate and control optical computer processes; and how to interface the optical computer with the human world. In the opinion of most industry observers, a working optical computer is decades away. Nonetheless, Japanese and American researchers are devoting increasing resources to optical computer projects.

Energy - This aspect of optoelectronics is often left out of discussions of the industry because most countries classify it under alternative energy programs. In Japan, however, the field has been included within the boundaries of optoelectronics as more exotic forms of photovoltaic and laser fusion equipment are developed. Photovoltaics could have broad applications as per-watt costs fall and durability increases. Power arrays using non-silicon based cells will be flown on Japan's upcoming satellites, and solar cells are showing up in a broad range of consumer products. Laser fusion reactors are not likely to be commercially feasible before the end of this century, but the Japanese government is moving ahead with an ambitious development program.

The Dawn of the Optoelectronics Industry: The 1970s

Like many of Japan's high technology industries, the optoelectronics business has its roots across the Pacific in the United States. Lasers and solid-state components were developed by American Telephone & Telegraph Co.'s

(ATT) Bell Laboratories, and U.S. scientists had expounded the basic theories of fiber optics by the early 1960s. Unlike many other knowledge-intensive industries, however, the Japanese have been pioneering shoulder-to-shoulder with the Americans.

Nippon Sheet Glass Co., Ltd and NEC Corp. were the first to succeed in producing a workable fiber-optic cable. This 1969 effort, based on a complicated, jointly developed process, did not offer acceptable performance, however; the strength of the light signal dropped 50 percent every fifteen meters (200 decibels/kilometer). Corning Glass Works took a big step forward the next year when it successfully produced optical fibers with one-tenth the light loss of Japan's first effort. By 1974, Bell scientists had reduced the light-loss factor so that a signal could travel almost 3 kilometers before losing 50 percent of its strength. Three years later, four fiber-optic manufacturing methods had been developed: Bell Laboratory's modified chemical vapor deposition (MCVD) and outside vapor deposition (OVD); N.V. Philips' (Netherlands) plasma chemical vapor deposition (PCVD); and Nippon Telegraph and Telephone Public Corp.'s (NTT) vapor-phase axial deposition (VAD).

MCVD, OVD, and PCVD create optical-fiber preforms (which look like glass sausages) by laboriously layering molten glass containing different amounts of impurities on the inside of glass tubes. NTT's method for making preforms is radically different. Each preform is grown by injecting vaporized glass and other chemicals into a chamber under strict temperature and pressure controls. This method offers significant advantages. The impurity gradient from the center to the outside of each preform, which is responsible for keeping the light beam within the optical fiber without significant loss or interference, is created in a single step. Moreover, it is possible to produce endless preforms that can be drawn into endless optical fibers. This makes continuous production feasible and less time-consuming.

In contrast, development of laser technology has not been one of Japan's strong points, although the Japanese have led the way in applying lasers to industrial and consumer products. In one area, however, they have made significant contributions: semiconductor lasers. Japanese researchers have improved the power and information capacity of solid-state lasers while simultaneously reducing their production costs.

In general, the Japanese have followed the familiar pattern of licensing technology from abroad and targeting scarce financial and human resources on a few critical areas. Government aid was important in the early stages of the industry, both as a source of money and as a secure market. Today, however, private companies are the source of most innovations and products, with the exception of a few very high-risk/high-cost areas such as laser fusion and optical computers.

The Industry Today and Tomorrow

Private Companies - Approximately 200 companies belong to the Optoelectronic Industry and Technology Development Association (OITDA), the principal trade association in Japan. OITDA conducts long-range growth studies. It also publishes an annual survey of the industry based on the activities of its members, which are drawn from practically every manufacturing field and most of the important service fields. While only estimates, these survey results have some weight because of the association's broad base.

According to the association's fiscal 1983 survey, light-emitting diodes held the top sales spot at some Y60 billion ($250 million); fiber-optic communications equipment rang up Y45 billion ($188 million) in revenues; optical fibers had Y25 billion ($104 million) in sales; laser video and audio disc equipment, laser printers, laser machine tools and light sensors took in approximately Y17 billion ($71 million) each; and grouped at the bottom were lasers of all types, solar cells and photoreceptor components, with sales of Y15 billion ($63 million) each.

The industry is dominated by Japan's electronics giants, including NEC, Fujitsu, Ltd., Hitachi, Ltd. and Sumitomo Electric Industries Ltd. Rapid technological advances, however, have enabled smaller companies to grab a share of the market, either as subcontractors, such as Furukawa Electric Co., Ltd., or as specialized suppliers like Japan Vacuum Technology Co., Ltd. and Taisei Corp. Competition is hottest in the fiber-optic industry, attracting potentially powerful companies such as Mitsubishi Rayon Co., Ltd. and Asahi Chemical Industry Co., Ltd. The manufacturing equipment market involves numerous companies pursuing specialized segments. Toshiba Corp. and Yaskawa and Co., Ltd, for example, have produced laser-equipped robots that possess adequate flexibility to be applied in a number of situations and are priced between Y30 million and Y60 million ($122,000 to $245,000), depending on options. Solar cell output is projected to quadruple by fiscal 1985, supplying as much as 13 percent of Japan's total energy consumption and offering the handful of companies dominating this market long-awaited profits.

As indicated in Table 1, total industry demand is forecast to remain very strong through the year 2000. It is interesting to note that the share of complete systems is expected to grow significantly, an indication of the long-term strategy of Japanese companies. In the short-term, however, there is evidence that Japanese firms are having trouble making the transition from manufacturing components to assembling pieces of equipment.

A more detailed medium-term demand outlook is given in Table 2. It also shows spectacular projected growth rates. Rapid growth resulting from the liberalization of Japan's domestic telecommunications market could lead to a boom of the magnitude projected. Even if OITDA's forecasts prove to be wildly optimistic, the industry should experience above-average growth for several decades.

From a global perspective, some observers consider Japan's optoelectronics industry to be on a par with this country's, but this is a hotly debated point. The Japanese do command about 40 percent of the $1 billion-plus global market for optoelectronic components. They have a smaller share of global optoelectronic systems sales, but are aggressively pursuing markets and customers.

Universities and Private Research Institutes - Japan's graduate and post-graduate institutions do not seem to play as large a role in the optoelectronics industry as they do in the United States or Europe. Research appears to be concentrated in particular areas and is not well-funded. Robotic vision systems, precision measurement equipment and medical applications account for the lion's share of educational institution-sponsored programs. Some important advances have been made, including a practical three-dimensional vision system and creative uses of medical lasers, but the vitality exhibited by American universities is not present in Japan.

There are a number of reasons for this, but tight budgets and mountains of procedural regulations are the main culprits. There is no lack of student interest, but there is a shortage of competent professors. (Most top personnel are found in private corporations where the pay is significantly higher.) Nothing less than a complete overhaul of the education system is likely to alter this situation.

Government Programs - The close government-industry cooperation that has characterized a number of high technology fields in Japan is evident today in optoelectronics, although at a reduced level. To stimulate the industry in the 1970s, Tokyo was quite direct about protecting domestic producers, encouraging technology imports and fostering research. Once momentum was generated, the government withdrew to concentrate on specific high-risk projects. Old habits die hard, however, and Tokyo's continued protective impulses disquiet foreign companies and governments alike.

The Science and Technology Agency (STA), the Ministry of International Trade and Industry (MITI) and NTT have been the centers of government activities in optoelectronics. Under the aegis of the 1978 Extraordinary Measures Law for the Promotion of Specific Machinery and Electronics Industries (PL 84), MITI was directed to draw up general development outlines and encourage private firms to enter the field through research grants and joint projects. Several projects have been sponsored, including one to develop an optical instrumentation and control system and an integrated voice/video system now being rewired with fiber optics (the "Hi-Ovis" project in Higashiikoma).

MITI has also made four concessional loans to companies engaged in optical research. MITI has been instrumental in establishing (in 1979) and funding the Engineering Research Association of Optoelectronics Applied Systems, which operates the Optoelectronics Joint Research Laboratory (OJRL). In cooperation with fourteen major Japanese companies, OJRL leases space within Fujitsu's Kawasaki laboratory, where 50 researchers are working mainly on an optical logic element, the basis for an optical computer. The five-year project, which started in 1981, is budgeted at $80 million, and the research results will be shared among the contributors.

The Science and Technology Agency has devoted its efforts toward more esoteric applications, including laser interferometry, advanced optoelectronic materials and long wavelength lasers. These programs are not large and have no immediate commercial use. They could be important, however, if some practical problems can be overcome and some theoretical difficulties resolved.

NTT has probably played the most critical role in the development of the optoelectronics industry in Japan. In the 1970s, NTT poured hundreds of millions of dollars annually into fiber-optic projects in cooperation with private firms. Since NTT is barred from manufacturing any type of equipment, it developed close relations with a handful of supplier companies, including

NEC, Fujitsu, Oki Electric Industry Co., Ltd. and Hitachi. NTT's buy-Japan policy provided domestic producers with a secure market. In addition, NTT was willing to pay high prices for products developed to its specifications, perhaps contributing to the rapid development of a globally competitive industry. Although NTT's monopoly over the domestic telecommunications market is about to be broken, it will continue to play a major role in the industry's development since a significant portion of its $400 million research budget is devoted to fiber optics and many of its 3,500 researchers are working in this field.

In comparison with Japanese government efforts in other industries, support for optoelectronics is quite small. Projects aimed at biotechnology and electronics are both more numerous and better funded. As in other industries, it is difficult to gauge the effectiveness of the government's initiatives, but it appears that government programs provided an important boost to the industry in its infancy. At the same time, though, Tokyo seems to have reduced its presence in the industry as it has matured. Despite this pullback, the U.S. government is still uneasy about Tokyo's influence over the optoelectronics marketplace.

U.S.-Japan Competition in Optoelectronics

There are no specific points of friction between the U.S. and Japanese governments over optoelectronics, but the problems American makers of telecommunications equipment are said to encounter also face manufacturers of optoelectronics products. Access to Japan's telecommunications equipment market has long been criticized as nonexistent and NTT's procurement policies have come under special attack (see JEI Report No. 5B, February 3, 1984). The liberalization of Japan's communications market may defuse these issues -- unless Americans feel they are not getting a fair deal (see JEI Report No. 48B, December 21, 1984).

Japanese fiber-optic makers have also had their share of problems getting into the U.S. market. Fujitsu's low bid for a Boston-Washington optical cable planned by ATT was rejected in part because of rumblings from Washington about national security. To get around concerns about reliance on foreign manufacturers for defense-sensitive products, Fujitsu, NEC, Sumitomo Electric and Fujikura, Ltd. are building or plan to construct manufacturing facilities in the United States.

While this may eliminate the national security problem, Japanese companies face a strong legal challenge from Corning Glass Works over patents basic to the industry. Corning's suit contends that Sumitomo Electric's fibers infringe on several of its patents. The case is before the International Trade Commission (ITC) and could possibly lead to a ban on imports from almost every Japanese company. It is not at all certain which way the ITC will vote on this case, and Corning does not seem interested in an out-of-court settlement.

Technology transfers between private companies are numerous. Drexler Technology Corp. of Mountain View, California, has licensed seven Japanese companies to use its laser card technology. So many firms have agreed to use the Drexler information storage system that the Japan Business Machine Makers Association is moving toward adopting it as the Japanese standard. Technology is flowing in both directions: Hewlett-Packard Co. will import Canon Inc.'s personal-size laser printer cartridges, while Shibuya Kogyo Co., Ltd. has obtained a license from Questek Inc. of New Bedford, Massachusetts to produce and distribute the American firm's excimer laser in Japan.

Conclusion

It is clear that close Japanese government-industry cooperation has yielded a world-class optoelectronics industry in less than ten years -- an achievement that makes its competitors uneasy. If Japan fulfills the letter and spirit of its planned telecommunications reforms, however, this unease should quickly evaporate. Competition between American and Japanese companies will be fierce, but there are also numerous opportunities for cooperation. Industry leaders and the governments of both countries are beginning to see the possibilities.

For further information, contact Jon Choy.

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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Table 1: Annual Sales of Japan's Optoelectronics Industry

(in billions of yen and percentage of total sales)

	Actual		Estimated	Projected		
	FY 1981	FY 1982	FY 1983	FY 1985	FY 1990	FY 2000
Components	Y89.3 (55.9%)	Y165.3 (59.3%)	Y236.1 (54.8%)	Y194.0 (22.0%)	Y411.0 (19.0%)	Y2,639.2 (22.0%)
Equipment	42.7 (26.7)	83.5 (30.0)	142.0 (33.0)	563.4 (62.0)	1,362.9 (64.0)	5,037.8 (42.0)
Systems	27.8 (17.4)	29.7 (10.7)	52.6 (12.2)	146.0 (16.0)	350.0 (17.0)	4,294.0 (36.0)
Total	159.8 (100.0)	278.5 (100.0)	430.7 (100.0)	903.4 (100.0)	2,123.9 (100.0)	11,971.0 (100.0)

Source: Optoelectronics Industry and Development Association, Annual Survey, FY 1983

Table 2: Domestic Demand Outlook for the Optoelectronics Industry

	1983	1988	Annual Growth
Semiconductor Lasers (pieces)			
1.55 microns	0	500	--
1.30 microns	3,000	200,000	132%
0.85 microns	7,000	180,000	91
0.78 microns	500,00	7,000,000	70
Gas Lasers (units)			
Helium-neon	150,000	250,000	11
Argon	600	3,000	38
Carbon dioxide (CO_2)	300	1,500	38
Excimer	40	320	52
Solid Lasers (units)			
Ruby	15	15	0
Quartz	30	30	0
Yttrium-Aluminum-Garnet(YAG)	570	2,100	30
Dye Lasers (units)	50	250	38
Light-Emitting Diodes (pieces)			
Display	1,820,000,000	6,880,000,000	30
Alpha-numeric	98,000,000	292,000,000	24
1.55 microns	0	0	--
1.30 microns	2,000	670,000	220
0.85 microns	90,000	1,400,000	73
Discrete Photoreceptors (pieces)			
Photodiodes	30,000,000	75,000,000	20
Phototransistors	80,000,000	360,000,000	35
PIN (Si)	680,000	1,300,000	14
Avalanche diodes	13,000	160,000	65
Long wavelength	15,000	1,012,000	132
Array Photoreceptors (pieces)			
One-dimensional	350,000	1,000,000	23
Two-dimensional	500	350,000	270
Complex Opto-Elements (pieces)			
Photocouplers	120,000,000	320,000,000	22
Photointerrupters	60,000,000	180,000,000	25
Solar Cells (Kilowatts)			
Personal use	2,300	9,400	33
Power generation	900	22,000	90
Optical Fibers (kilometers)			
Multimode, silicon	4,000	20,000	38
Multimode, germanium	24,000	770,000	100
Singlemode, quartz	44,000	250,000	42
Multimode, composite	5,000	100,000	82
Polarized	80	610	50
Bundled fibers	150	180	4
Optoelectric Components (pieces)			
Demultiplexers	2,000	20,000	58
Multiplexers	1,000	1,200,000	313
Filters	4,500	200,000	114
Isolators	250	20,000	140
Light switches	450	100,000	195
Light connectors	170,000	6,300,000	106
Medical Lasers (units)			
Eye-use	170	280	10
External-use	130	260	15
Internal-use	30	250	53
Light Transmitters (units)			
Digital, simple	50,000	1,200,000	89%
Digital, general	1,000	14,000	70
Analog, simple	1,500	180,000	161
Analog, general	100	260	21
Optical modems	1,500	9,000	43
Traveling-wave tubes	100	10,000	151
Light Transmitter Testers (units)			
Standard light source			
1.30 microns	500	2,400	37
0.85 microns	100	460	36
0.78 microns	100	1,000	58
Power meters	5,000	12,000	19
Baseband testers	100	400	32
Phase detectors	0	170	--
Attenuation meters	200	1,500	50
OTDR (units)	400	1,000	20
Spectrometers (units)			
Interferometers	20	150	50
Spectral analysers	70	400	42
Construction Machinery (units)	700	3,000	34
Optical Sensors (units)			
Ohmmeters	40	500	66
Voltmeters	40	150	30
Temperature	50	50,000	298
Flow	60	5,000	142
Vibration	80	800	58
Pressure	0	800	--
Distance	320	1,100	28
Depth	180	1,000	41
Optical Disc Players (units)			
Consumer video discs	70,000	500,000	48
Write-only video discs	150	1,500	58
Read-write video discs	0	500	--
Audio discs	100,000	1,700,000	76
Optical Printers (units)			
Semiconductor laser	5,000	160,000	100
Solid laser	1,200	3,000	20
LED	200	30,000	172
LCD	0	15,000	--
Laser Scanners (units)	2,000	15,000	50
Manufacturing Lasers (units)			
Cutters, YAG	15	80	40
Cutters, CO_2	65	500	50
Welders, YAG	100	540	40
Welders, CO_2	25	280	62
Laser markers, YAG	50	450	55
Laser markers, CO_2	30	450	72
Inscribers, YAG	5	10	15
Inscribers, CO_2	25	90	29
IC trimmers, YAG	190	580	25
IC mask exposers, YAG	35	120	28
IC mask exposers, CO_2	0	10	--

Source: Optoelectronics Industry and Development Association, Medium-Term Outlook, FY 1984

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Update on R&D in Japan

Reports issued recently by the Japanese government reveal that total outlays for research and development rose 10 percent in the year through March 1984. Despite this gain, Japan remains in third place in the international ranking of R&D expenditures, far behind the United States and just short of the Soviet Union. The reports also indicate that basic research in Japan will receive greater attention in coming years.

The Science and Technology Agency's annual white paper was devoted entirely to a discussion of basic research, including how Japan stacks up against other Western industrialized countries, where current research is directed, and what the government should be doing. According to the report, Japan spent Y858.3 billion ($3.5 billion) on basic research in fiscal 1982 (14.6 percent of total R&D outlays), compared with $10.1 billion (12.3 percent) in the United States, and $2.9 billion (19 percent) in West Germany (fiscal 1981). The report laments the fact that Japanese researchers publish only one-fifth or one-tenth as many theses on subjects ranging from computers to new materials to biotechnology as their counterparts abroad. It places part of the blame for this inferior performance on government research institutes and private companies that tend to spend more on applied research.

STATISTICAL SUPPLEMENT

Trade and Payments Data

(in millions of dollars unless otherwise indicated)

	1982	1983	January-November 1983	January-November 1984	September 1984	October 1984	November 1984
Japan's Balance of Payments							
Trade Balance	$ 18,079	$ 31,454	$27,712	$39,308*	$ 5,220*	$ 4,504*	$ 3,854*
Exports (f.o.b.)	137,663	145,468	130,564	152,744*	14,484*	14,778*	13,853*
Imports (f.o.b.)	119,584	114,014	102,852	113,436*	9,264*	10,274*	9,999*
Current Account Balance	6,850	20,799	17,617	30,370*	4,348*	3,889*	2,904*
Long-Term Capital (net)	-14,969	-17,700	-15,860	-41,531*	-2,189*	-4,021*	-4,869*
Overall Balance	-4,971	5,177	4,140	-13,961	2,777	-274	-2,032
International Reserves (end of period)	23,262	24,496	24,697	26,075	25,444	25,702	26,075
Japan's Customs Clearance Trade							
Trade Balance	6,900	20,534	17,582	29,061*	4,493	3,598	3,135*
Exports (f.o.b.)	138,831	146,928	131,711	154,192*	14,644	14,922	13,985*
Cars	18,015	19,535	17,724	20,090*	1,855	1,835	1,825*
Steel	15,645	12,843	11,510	12,402*	1,207	1,213	1,103*
Imports (c.i.f.)	131,931	126,393	114,128	125,131*	10,150	11,324	10,850*
Crude Oil	46,274	40,063	35,777	36,033*	2,650	3,079	3,051*
Japan-U.S. Trade							
Trade Balance	12,151	18,181	15,973	29,991*	3,311	3,240	3,226*
Exports (f.o.b.)	36,330	42,829	38,166	54,485*	5,346	5,522	5,247*
Imports (c.i.f.)	24,179	24,648	22,193	24,493*	2,034	2,283	2,022*
Yen-Dollar Exchange Rate							
Tokyo Spot Market (end of period)	Y235.00	Y232.20	---	---	Y245.50	Y245.25	Y246.30
U.S.-Japan Trade							
Trade Balance	-16,778	-19,289	-17,568	-31,552	-3,172	-3,203	-2,444
Exports (f.a.s.)	20,966	21,894	19,809	21,433	1,768	1,872	2,144
Industrial Supplies	9,173	8,734	7,859	8,239	689	728	792
Food and Feed	4,971	5,555	5,118	5,523	468	384	561
Capital Goods	4,434	5,116	4,549	5,055	385	514	477
Consumer Goods	1,356	1,394	1,282	1,363	130	130	118
Imports (Customs)	37,744	41,183	37,376	52,985	4,940	5,075	4,588
Automotive Products	12,890	14,919	13,476	17,082	1,471	1,538	1,429
Industrial Supplies	6,795	5,391	4,898	6,763	624	650	570
Consumer Goods	7,842	8,296	7,528	10,545	1,006	1,083	996
Capital Goods	9,530	11,896	10,851	17,827	1,773	1,723	1,527

*Preliminary

STATISTICAL SUPPLEMENT

Japanese Economic Indicators

(percentage change from year-earlier period unless otherwise indicated)

	1982	1983	January-October 1983	January-October 1984	August 1984	September 1984	October 1984
Discount Rate (end of period)	5.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Outstanding Money Supply	9.2%	7.4%	7.4%	7.8%	7.7%	8.1%	7.7%
Industrial Production	0.3%	3.6%	2.4%	11.4%	11.0%	8.6%	12.0%
Manufacturing Operating Rate	-2.9%	1.6%	0.4%	9.0%	8.6%	5.8%	8.0%
Number of Bankruptcies	-2.8%	11.9%	10.7%	11.3%	4.7%	-3.6%	5.7%
Residential Construction Starts	-0.5%	-0.8%	-1.5%	4.5%*	4.3%	3.8%	5.8%*
Job Openings to Applications (ratio)	0.61	0.60	0.59	0.64	0.64	0.64	0.65
Nominal Wages	4.5%	3.5%	3.7%	4.4%	3.4%	4.5%	4.4%
Labor Productivity	1.0%	4.6%	2.3%**	10.7%**	10.7%	n.a.	n.a.
Wholesale Prices	1.8%	-2.2%	-2.1%	-0.3%	0.2%	0.3%	0.7%
Consumer Prices	2.7%	1.9%	1.8%	2.2%	1.9%	2.3%	2.2%
Yen-Based Export Prices	3.9%	-6.0%	-6.2%	0.2%	1.1%	1.7%	3.3%
Yen-Based Import Prices	7.9%	-7.8%	-7.0%	-4.0%	-3.5%	-3.1%	0.0%

*Preliminary
**Through August of each year only.

For Japan's most recent GNP figures, see JEI Report No. 47B, December 14, 1984.

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RECENT TRENDS IN JAPANESE IMPORTS: A STUDY BY THE BANK OF JAPAN*

Summary

U.S. trade officials, frustrated by the seemingly non-stop expansion of the trade deficit with Japan, are once again pressing Tokyo to take steps to increase imports of American-made products, particularly manufactured goods. In the following article, Bank of Japan economists analyze the sluggish behavior of Japanese imports during the early 1980s and examine why purchases began to rebound strongly after mid-1983. They point out that while structural changes in the Japanese economy dampened demand for raw materials and fuels, imports of manufactures outpaced the growth of the economy. This expansion, however, was not big enough to rein in Japan's trade surplus. For imports to increase significantly, argue the authors, the yen must rise in value. A stronger yen would be particularly effective in stimulating demand for foreign-made manufactures, it is noted.

Introduction

Japan's industrial structure underwent major changes after the second oil crisis of the 1970s. This transformation had two beneficial effects on imports: imports of raw materials and fuels fell due to a decline in the share of the materials industry in GNP and the decreased input volume per unit of output in that industry; and imports of intermediate goods declined, held down by the decreased input volume per unit of output in the processing industry. On the other hand, the rising share of the processing industry in GNP and stepped-up substitution of imports for domestically manufactured intermediate goods contributed to an increase in imports. On the whole, however, the changes in the industrial structure led to a reduction in the volume of Japan's imports.

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The volume of final goods and foodstuffs imported varied in line with changes in relative prices but continued to increase steadily and at a faster pace than the Japanese economy. This was the result of increased demand for imported goods, which reflected a rise in the standard of living and the consequent diversification of consumer tastes, and the gradual easing of restrictive measures on imports of foodstuffs.

The volume of imports began to increase sharply after mid-1983 as Japan's economy moved into the recovery stage. The relative prices of imported goods also became more attractive due to the rise in the value of the yen after the end of 1982. Moreover, there was a lull in the structural transformation that had contributed to the low level of imports until mid-1983.

Despite the increase in imports, Japan has continued to record an enormous trade surplus because exports have expanded more rapidly than imports. It is necessary for Japan to increase imports steadily in order to improve its external imbalance and to ward off international trade frictions. For this purpose, Japan must make further efforts to expand domestic demand and open up the domestic market and, at the same time, stabilize the yen's value at a higher level. In the short run, the effect of a rise in the value of the yen on imports is not large. However, there is likely to be an increase in imports of intermediate goods and final goods, both of which have expanded their shares of total imports in recent years. Furthermore, from a somewhat longer-term viewpoint, the appreciation of the yen will help encourage the substitution of imported goods for domestically produced ones. Considering the effects of a rise in the value of the yen on both imports and exports, stabilizing the yen's value at a higher level will help achieve external equilibrium.

Trends and Changes in Imports

Trends in Imports - There was a bulge in imports (measured in dollar terms on a c.i.f. basis) during both of the oil crises of the 1970s owing to an upsurge in import prices. Excluding these two unusual periods, imports generally continued to increase at a stable pace. After the second oil crisis, however, imports reversed course and showed a significant slowdown in growth in 1981. In both 1982 and 1983, they dropped sharply, registering falls of 7.9 percent and 4.2 percent, respectively, at annual rates.

Trends in the value of imports after the second oil crisis may be divided into two factors: price and volume (see Figure 1). Import prices started to decline as a result of the worldwide relaxation of supply and demand

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conditions for commodities. They also dropped in 1983, mainly because of falling oil prices. The decline in the value of imports in 1982 and 1983 owed much to the fall of import prices. In addition, import volume continued to contract during the three years after the second oil crisis (1980 to 1982) as Japan's economic growth remained low by historical standards. (The average growth of real GNP was 3.8 percent during this time.) Hence, the decrease in import volume seems to have reflected both temporary and cyclical factors. This, however, was the first time since World War II that the volume of imports declined for three years in a row despite positive rates of real economic growth. It is likely that changes in the structure of the Japanese economy during this period restrained imports. (The elasticity of import volume with respect to real GNP changed from plus 1.44 in the 1976-79 period to minus 0.41 in the 1980-83 period.)

Accordingly, the sluggishness of imports in value terms between 1981 and mid-1983 seems to have resulted from three interrelated factors: falling import prices induced by the worldwide recession, the stagnation of the domestic economy, and a structural shift that brought import economization in its wake.

Changes in the Structure of Imports - How then has Japan's import structure changed? Figure 2 illustrates the composition of imports by type of goods. In terms of value, no large changes occurred except for fuels, which expanded their share. Throughout most of the period from 1970 to 1983, raw materials and fuels accounted for about 60 percent of imports. Manufactured goods and foodstuffs commanded nearly 30 percent and 10 percent, respectively.

A review of imports by volume reveals that the share of raw materials and fuels contracted substantially -- from 53.1 percent in 1970 to 37.9 percent in 1983, while manufactured goods expanded greatly in the same period -- from 33.3 percent to 45.6 percent. These figures show that Japan's import structure is shifting toward imports of manufactured goods and away from imports of raw materials and fuels.

These changes are related to substantial changes in Japan's industrial structure and consumption patterns as well as to the progress of industrialization in developing countries. In the following sections this paper examines the influence of changes in Japan's industrial structure on the composition and volume of imports, particularly raw materials and fuels and intermediate goods.

Import Trends and Industrial Structure

Raw Materials and Fuels - The volume of imported raw materials and fuels showed a sizable decline in 1974 immediately after the first oil price hike, but from 1975 to 1979 it moved up with some fluctuations. Following the second oil price hike, however, volume decreased almost continuously after peaking in mid-1979 and did not change direction until recently (see Figure 3). During this period the real growth rate continued to be positive. As a result, the elasticity of the import volume of raw materials and fuels with respect to real GNP continued to be negative from 1980 to 1983 (minus 0.99) after declining to plus 0.26 in the 1975-79 period from 1.42 in the 1971-74 period.

The volume of basic materials used by the materials industry followed a pattern very similar to that of the import volume of raw materials and fuels. This is attributable to the fact that most imported raw materials and fuels are consumed first by the materials industry, which includes steel, nonferrous metals, chemicals, paper and pulp and textiles. Afterward, products manufactured by that industry are used as intermediate goods by other industries or are consumed directly.

Changes in consumption by the materials industry (and hence movements in the import volume of raw materials and fuels) may be divided into two categories: the level of production in the materials industry and the trend in inputs of basic materials per unit of output in that industry. Therefore, changes in the elasticity of the volume of imported raw materials and fuels with respect to real GNP can be explained by two factors: (1) the deviation between the output level of the materials industry and real GNP (changes in the share of the materials industry), and (2) changes in the input volume of raw materials per unit of output in the materials industry (see Figure 4).

Production in the materials industry increased rapidly until the first oil price hike, owing to the abundant volume and low prices of raw materials and fuels and the robustness of fixed investment, which in turn reflected vigorous demand for manufactured goods. Average annual output in the materials industry rose 11.2 percent between 1966 and 1973, higher than the annual 9.8 percent growth rate of real GNP during the same period. This shows that the growth of the materials industry was a driving force in the country's rapid economic expansion.

After the first oil crisis, the share of the materials industry in real GNP declined temporarily. This resulted from weak demand for basic materials as the sharp rise in raw material and fuel costs led to an upsurge in prices. After the economy entered the recovery phase, industrial production outpaced real GNP and the materials industry recovered at a somewhat more rapid pace. (Industrial production grew at a 5.8 percent average annual rate between January-March 1975 and October-December 1979, while real GNP during the same period rose 5.3 percent per year.)

After the second oil price hike, however, production in the materials industry continued to drop for a long period, falling by an average annual rate of -3.5 percent from the first quarter of 1980 to the last quarter of 1982, while real GNP grew at a 3.8 percent average yearly rate. The factors behind the persistent fall were: (1) a reduction in inputs per unit of output and the shift from domestically produced goods to imported materials in the processing industry in response to the rise in materials prices and (2) greater expenditures on services at the expense of goods.

Inputs per unit of output in the materials industry climbed at a 1.3 percent annual growth rate from 1965 until 1973, but after the first oil crisis, declined at an average annual rate of 1.8 percent from January-March 1975 to October-December 1979 -- as manufacturers tried to reduce energy consumption and streamline management in response to surging raw material and fuel prices. After the second oil crisis, the decline in the input-output ratio accelerated, falling at an average annual rate of 2.7 percent from

January-March 1980 to October-December 1982 (see Appendix Note 1), due in part to increased capital expenditures.[1]

Thus, although the real growth rate of the economy remained positive, these two factors -- the decreased share of the materials industry and the reduction in the amount of raw materials and fuels used by that industry to make a unit of output -- caused the volume of imported raw materials and fuels to decline. Figure 4 illustrates the estimated impact of these two factors. During the five years following the first oil crisis, there was a slight increase in the share of the materials industry in real GNP, and this raised the import volume of raw materials and fuels by a small 0.4 percent per year. However, a decline in the input volume per unit of output during this period lowered the import volume of raw materials and fuels at a 1.8 percent annual rate. During the three years following the second oil crisis, the share of the materials industry and the input volume per unit of output both declined, which contributed to a sizable fall in the import volume of raw materials and fuels -- by 7.3 percent and 2.7 percent, respectively, per year. Thus, the movements during the above two periods showed a very contrasting pattern.

After the beginning of 1983, however, a rise in the share of the materials industry led to an increase in import volume. At the same time, the downward effect on imports resulting from the reduction in the volume of raw materials and fuels consumed per unit of output lessened significantly.

Imports of Intermediate Goods - Figure 5 shows trends in the import volume of intermediate goods, used mainly by the processing industry (machinery and metal products). Import volume continued to recover steadily after falling sharply between mid-1974 and early 1975 in reaction to the economic downturn and big speculative purchases during the first oil crisis. Real imports showed a small drop immediately after the second oil crisis but advanced steeply in 1981. Moreover, in contrast to raw materials and fuels, the elasticity of the import volume of intermediate goods with respect to real GNP growth also rose sharply, climbing to 1.33 in 1981, 2.73 in 1982 and 3.30 in 1983.

The output of the processing industry fluctuated almost in tandem with the volume of intermediate goods consumed until 1979. From 1980 through 1982, however, an unusual phenomenon too place: production increased but consumption of intermediate goods fell. On the other hand, starting from about the middle of 1981, the volume of imported intermediate goods increased at a faster rate than production and consumption of intermediate goods in the processing industry. These movements suggest that both the reduction in the input-output ratio and the substitution of imported goods for domestically produced goods occurred simultaneously.

Figure 6 examines this point in greater detail. It divides the volume of imported intermediate goods into three factors: changes in the share of the processing industry in GNP, changes in the volume of intermediate goods consumed per unit of output, and the substitution of imports for domestic goods. During the five years after the first oil crisis, the rise in the processing industry's share of GNP raised the import volume by 5.9 percent annually, but brought little change in the input volume per unit of output. In the three years following the second oil crisis, the growth rate of industrial production was smaller than that of real GNP -- due mainly to increased expenditures on services -- and the ratio of processing to GNP grew more slowly. Consequently, its pull on the import volume of intermediate goods lessened substantially, dropping to just 0.5 percent a year. More importantly, the processing industry's input volume per unit of output decreased sharply during this period, lowering the quantity of imported intermediate goods by 6.3 percent annually. This decline was attributable not only to rationalization in the processing industry but also to the spread of more efficient production processes.

The substitution of imports for domestically produced intermediate goods has raised import volumes by 4 to 8 percent annually in recent years, and it is this process that accounts for the divergent behavior of the import volume of intermediate goods and the volume of basic materials consumed by the processing industry from 1981 on. Substitution was fueled by a spectacular decline in the international competitiveness of Japan's materials industry (for example, aluminum and petrochemicals) because of the run-up in the prices of raw materials and fuels in the 1970s, and accelerated imports of lower-priced products like steel and cotton yarn from newly industrialized countries (see Appendix Note 2).

In this connection, as Table 1 shows, the price elasticity of the import volume of intermediate goods was 1.25, a rather high level compared with that of other goods. Figure 7 shows that, when relative prices of imported goods are more favorable, the share of imported goods expands after a certain period of time. In recent years, however, the relationship between relative prices and the share of imported goods has become weaker. The share of imports rose from 1981 on despite the fact that relative prices were less favorable than in 1978 -- a reflection of the fact that imported goods, including aluminum ingots, naphtha and some steel products, which had been considered marginal sources of supply, are now treated as stable supply sources.

Industrial Structure and Imports - To sum up, the substantial changes in Japan's industrial structure after the second oil crisis have transformed its import structure by reducing the share of raw materials and fuels and increasing the share of intermediate goods. Overall, these changes have reduced Japan's import volume through five channels: (1) the decreased share of the materials industry, (2) the reduced input volume per unit of output in the materials industry, (3) the reduced input volume per unit of output in the processing industry, (4) the increased share of the processing industry, and (5) the substitution of imports for domestically produced intermediate goods in the processing industry.

Needless to say, these five factors are inter-related. Table 2 estimates the effects of these factors on the import volumes of raw materials and fuels and intermediate goods, and shows an annual decline of 3.9 percent during the 1980-82 period. During this time, the shrinking materials industry pulled the overall import volume down by 5.4 percent annually and dips in the input volume per unit of output in both the materials industry and the processing industry accounted for drops of 2 percent and 1.6 percent a year, respectively. On the other hand, the impact of the increased share of processing on the import volume was only a gain of 0.1 percent annually. The use of foreign intermediate goods in place of domestic products raised these imports 4 percent annually from 1980 to 1982, but at the same time reduced imports of raw materials and fuels. Accordingly, the overall effect of the shift to imported intermediate goods was only a 0.6 percent annual boost to the import volume.

Imports of Final Goods and Foodstuffs

Final Goods - The import volume of final goods (manufactured goods excluding intermediate goods) continued to increase more rapidly than the Japanese economy as a whole during the 1970s and early 1980s (see Figure 8). The volume ratio of imports of final goods to total imports rose sharply -- from 17.4 percent in 1970 to 29 percent in 1983. At the same time, though, there were frequent and substantial short-run changes in the volume of imported final goods. These changes seem to have a close relationship with the movement of relative prices, except around 1979, when imports of manufactures responded with a lag to the rapid appreciation of the yen between 1977 and 1978.

The relationship between changes in the relative prices of final goods, which include both consumer items and capital goods, and the share of imports in the domestic market is shown in Figure 9. Changes in the share of imported consumer goods followed those of relative prices with a short lag, suggesting a comparatively close relationship between the two. Unlike intermediate goods, however, the changes in relative prices were slight, and the share of imported consumer goods remained almost unchanged in the neighborhood of 6 percent. The share of imported capital goods similarly fluctuated in line with the movements of relative prices. However, relative prices became considerably less favorable for imported goods after the second oil crisis, declining 35.1 percent between 1980 and 1983, and this contributed to a decline in the share of imports. The significantly reduced profitability of imported goods in terms of relative prices occurred (only in capital goods, not in other products. This was the result of the further strengthening of the price competitiveness of Japan's machinery industry after the second oil crisis, which was largely due to the rationalization of production and efforts to develop new products.

Foodstuffs - The volume of imported food climbed at a faster pace than real household expenditures on food and beverages during the eleven years through 1983 (see Figure 10), reflecting increased demand and the gradual easing of import restrictions. Significantly, the growth in the value of imports that were liberalized during the 1969-71 period substantially exceeded the expansion in the total import value of all food, although growth rates differed from commodity to commodity (see Appendix Note 4).

The short-term variations in import volume also reflected changes in relative prices. The sluggish pace of imports during the 1974-75 period and the sharp increase from 1977 to 1970 paralleled changes in the profitability of imports during these periods. As Figure 10 shows, the increase in the volume of imports in recent years coincided with the greater price competitiveness of foreign commodities. Therefore, if restrictions on imports of foodstuffs are further eased, relative price movements are expected to exert an even greater influence on the import volume than before.

Recent Import Trends and Outlook

After a long period of sluggishness, the volume of imports recovered strongly in the latter part of 1983 (see Figure 11). The extent to which this rebound will be succeeded by a sustained expansion is examined here by analyzing the relationship between imports and the business cycle, relative prices and structural changes in Japan's economy.

Business Recovery - The economy fell into recession from the autumn of 1981 to early 1983 because of a decline in exports, but recovered in the spring of that year, led by a sharp surge in exports. The export expansion continued in the following months and from around the middle of 1983 stimulated a moderate recovery in final domestic demand. In the process, industrial production increased at a faster pace than real GNP after lagging overall growth in both 1981 and 1982. (Industrial production increased by 8.5 percent from 1982's final quarter to the fourth quarter of 1983, compared with a 3.5 percent gain for real GNP. This accelerated inventory adjustment of raw materials and fuels, and since mid-1983 has induced imports to expand faster than real GNP.

The rapid growth of production was a result of two factors: the business recovery was led by exports, which have a strong ripple effect on output; and the recovery of consumption was closely related to the production of goods, as evidenced by the accelerated increase in spending for consumer durables in 1983 and the sluggish growth of expenditures for services.[2] At any rate, the large increase in industrial production was a significant factor in boosting imports throughout 1983.

Relative Prices - Relative prices of domestic and foreign goods are determined by the difference in inflation rates between Japan and other countries as well as by changes in the yen's value against the dollar. In the short run, though, the effect of fluctuations in the exchange rate is the major factor. The yen was weak from early 1981 to around the end of 1982, mainly because of the increased gap between American and Japanese interest rates and the stronger preference for dollar assets, but it then strengthened and generally moved within a narrow range during 1983.

In terms of the performance of prices and Japan's international balance of payments, the yen was too weak in 1983, but it did appreciate by 4.9 percent from 1982's average level. Because of the difference in inflation rates between Japan and other countries, import prices, even excluding crude oil prices, became more favorable relative to domestic prices in 1983, declining by 1.5 percent versus a 0.7 percent drop in domestic wholesale prices. As a result, the relative prices of imported goods (excluding crude oil) improved by nearly 6 percent. Imports of finished goods with a high demand elasticity increased at a faster pace than the recovery of domestic demand, which probably contributed to the sharp growth of imports after mid-1983.

Halt in Decline of Input-Output Ratio - As described earlier, the accelerated reduction in the input-output ratio resulting from investments for energy conservation and rationalization after the second oil shock was a significant factor behind the decrease in the import volume from 1980 to 1982. The round of large-scale plant and equipment investment for this purpose came to an end in 1982, and the 1983 decline in crude oil prices somewhat reduced the incentive to save energy. As a result, the rate of decrease in the input-output ratio slowed considerably. In the materials industry, the ratio declined at an annual rate of 0.3 percent between 1983's first quarter and last quarter, compared with a fall of 2.7 percent from January-March 1980 to October-December 1982; in the processing industry, the corresponding drops were 1.4 percent and 6.3 percent. Accordingly, Japanese business conditions were changing in such a way in 1983 that an increase in production would contribute to an expansion in imports.

Current Outlook for Imports - The increase in the volume of imports since mid-1983 can be attributed to a number of factors, including cyclical movements reflecting the business recovery and increasingly favorable relative imports prices in response to the appreciation of the yen. In addition, the decline in the input-output ratio -- the structural factor -- came to a halt.

Several factors point to the possibility that the volume of imports will continue to increase. First, the present business recovery, though initially export-led, will probably become more stable because of the recovery of final domestic demand. Second, the growth of imports is more likely to be related to increased production and consumption of raw materials and fuels and to inventory levels than it was during the recovery cycle after October 1977 (see Figure 12). And last, although there are many uncertainties about the yen's value, dollar-denominated import prices are not expected to rise substantially for some time; therefore, relative import prices are expected to remain favorable for Japan.

Japan's trade surplus in 1983 ended up at $31.5 billion, much higher than the previous peak of $24.6 billion in 1978. As noted, while the volume of imports increased sharply, the export volume rose at an even faster pace. Moreover, import prices fell by 5.4 percent in 1983, while export prices declined only 2.7 percent.

To avoid trade disputes, an important problem at present, Japan should take steps to reduce its large trade surplus by pursuing a steady expansion of imports. Because import prices are largely determined by conditions over which Japan has little direct influence, the country must basically reduce the margin of its trade surplus in volume terms. It is therefore necessary to determine whether the growth of imports in volume terms will exceed that of exports.

To examine why the volume growth of exports and imports diverge, import inducement coefficients by final demand category were estimated (see Table 3). The coefficients of both domestic demand and exports have fallen in recent years, but the decline in the import inducement coefficient of exports was especially large. This decline reflects the fact that the materials and processing industries succeeded in reducing the input-output ratio through rationalization and a shift in production to high value-added products; and that in the process, the share of the processing industry (whose import inducement coefficient originally was lower than that of the materials industry) in Japan's total exports increased. Therefore, when a business recovery is led by exports, as is currently the case, the divergence in the volume growth of exports and imports necessarily becomes greater than it was before. This is despite the fact that the import inducement coefficient of exports is larger than that of domestic demand.[3]

To correct the disequilibrium in the growth of export and import volumes, further efforts must be made to expand imports. For this purpose, it is necessary for domestic demand to remain on a recovery path. However, since the import inducement coefficient of domestic demand is relatively small, even if domestic demand expands at a faster pace in the future, the effect on imports will necessarily remain extremely small compared to the absolute value of the trade surplus. We estimate, for example, that an increase of 1 percent in real final demand causes the volume of imports to grow by about 0.8 percent (about $1 billion based on 1983 prices).

To expand imports, it is necessary for relative prices to move in a favorable direction. The ony way to realize this while maintaining the stability of domestic prices is to strengthen the value of the yen.

As the structure of Japan's imports in volume terms reveals a high proportion of raw materials and fuels that cannot be replaced by domestic commodities, the price elasticity of imports as a whole is not very high. On the other hand, the price elasticity of processed goods such as intermediate goods and final goods is relatively high. Moreover, the price elasticity of imported manufactures (final products and intermediate goods) has gradually risen in recent years (see Figure 13). Accordingly, the appreciation of the yen can have a significant impact on imports of manufactured products.

A breakdown of imports by products and regions (see Figure 14) shows that the share of manufactured goods imported by Japan from Europe and the United States far exceeded the average for total imports. Therefore, a stronger yen is expected to accelerate imports of finished goods not only from newly industrialized countries but also from Europe and the United States, where trade frictions are a serious problem. In addition, a rise in the yen's value will naturally put a brake on the expansion of exports, which would also help to correct the disequilibrium. Thus, stabilizing the value of the yen at a higher level while making efforts to open the domestic market should be the right course for Japan to expand the volume of imports and alleviate trade frictions.

Footnotes

[1] See "Recent Trends in Private Plant and Equipment Investment," Bank of Japan Special Paper No. 113, 1984.

[2] Changes in Real Household Expenditures

	1982		1983	
	Jan.-June	July-Dec.	Jan.-June	July-Dec.
Goods	2.6%	1.0%	-0.1%	1.3%
Durables	2.4	0.3	4.3	15.4
Services	2.9	5.7	1.2	0.1

[3] See "Structural Adjustment Problems of the Japanese Economy After the Second Oil Shock," Bank of Japan Special Paper No. 108, and "Recent Trends in Private Plant and Equipment Investment," Bank of Japan Special Paper No. 113.

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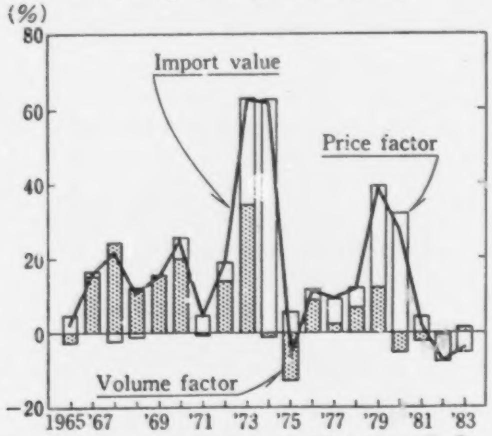
Figure 1 Trends in Import Value and Other Data (year-on-year comparison)

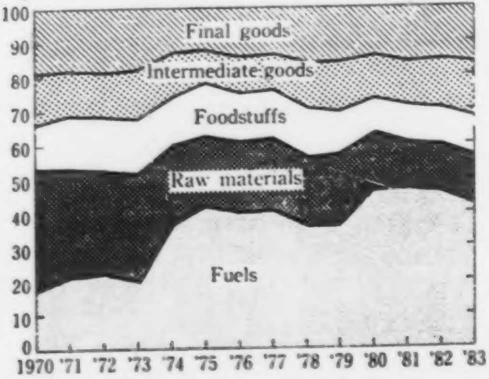


Note: Customs clearance basis in dollar terms. N. B. Dollar-denominated import prices were estimated by the Research and Statistics Dept., Bank of Japan.

Source: Summary Report on Trade of Japan (Japan Customs Association).

Figure 2 Percentage Composition of Imports by Goods Category

(1) in current dollars



(2) constant 1970 prices

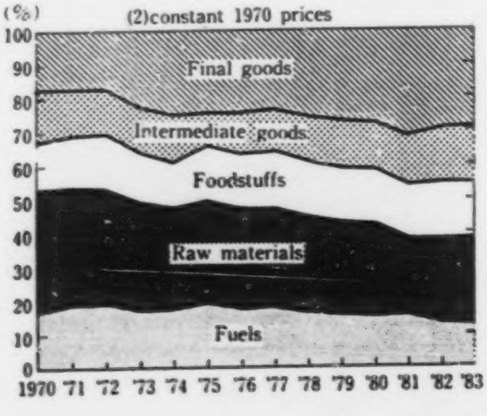
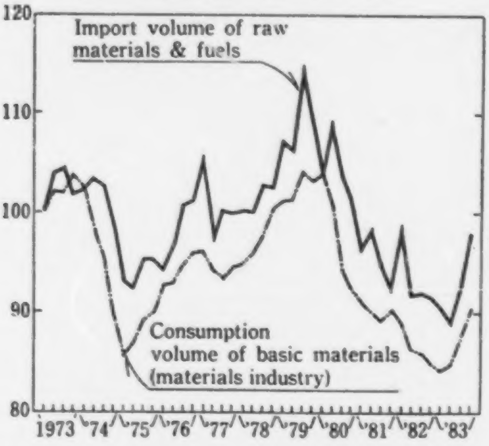


Figure 3 Trends in Import Volume of Raw Materials and Fuels (seasonally adjusted, 1973 I =100)



Notes:

1. Import volume of raw materials and fuels (mineral fuels excluding oil products) has been averaged by using 1980 import value as weights. Oil products have been placed under the category of intermediate goods.
2. Materials ludustry: iron and steel, nonferrous metals, ceramics, stone and clay products, petroleum, coal, chemicals (excl. medicines), paper and pulp, and textiles.

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI).

Notes:

1. Real shares were calculated by the following formula:

$$\text{1970 import value weights} \times \frac{\text{Import volume in given year}}{\text{Import volume in 1970}}$$

N. B. Import volume of fuels, intermediate goods and final goods was estimated by the Research and Statistics Dept., Bank of Japan.

2. Fuels: mineral fuels (excl. petroleum products).

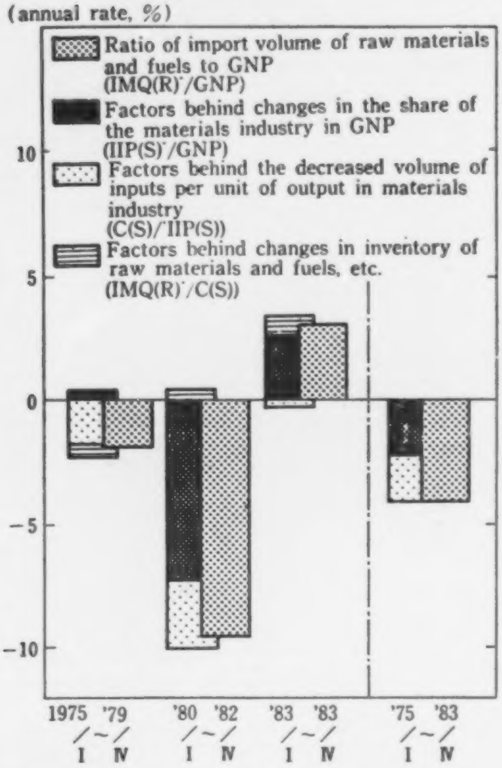
Intermediate goods: iron and steel, nonferrous metals, chemical products, textiles and petroleum products.

Final goods: manufactured goods excluding intermediate goods.

Source:

Summary Report on Trade of Japan (Japan Customs Association).

Figure 4 Factor Analysis of the Ratio of Import Volume of Raw Materials and Fuels to GNP (seasonally adjusted)



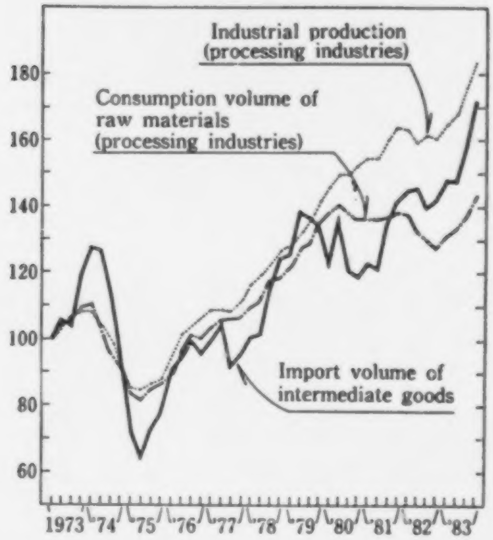
Notes:

1. The following identity equation was used to analyze the factors:
   $IMQ(R) = GNP \cdot (IIP(S)/GNP) \cdot (C(S)/IIP(S)) \cdot (IMQ(R)/C(S))$
   Accordingly, $(IMQ(\dot{R)}/GNP) = (IIP(\dot{S)}/GNP + (C(\dot{S)}/IIP(S)) + (IMQ(\dot{R)}/C(S))$
   (where, IMQ(R): import volume of raw materials and fuels.
   GNP: real GNP.
   IIP(S): materials industry production.
   C(S): consumption of basic materials by the materials industry.)
2. See Notes of Figure 3 for the description of import volume of raw materials and fuels and the materials industry.

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI), Annual Report on National Accounts (EPA).

Figure 5 Trends in Import Volume of Intermediate Goods (seasonally adjusted, 1973 I = 100)



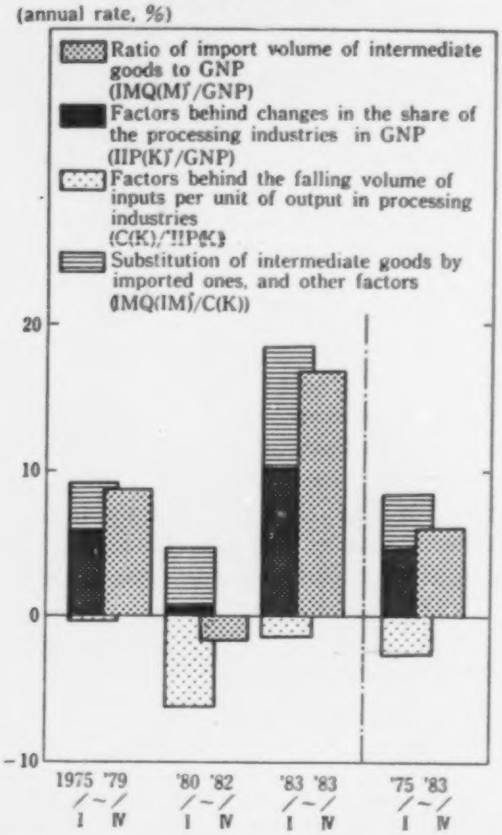
Notes:

1. Import volume of intermediate goods: Import volume of oil products, chemical products, iron and steel, nonferrous metals and textiles has been averaged by using 1980 import value weights.
2. Processing industries: Machinery manufacturing, metal products manufacturing.

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI).

Figure 6 Factor Analysis of the Ratio of Import Volume of Intermediate Goods to GNP (seasonally adjusted)



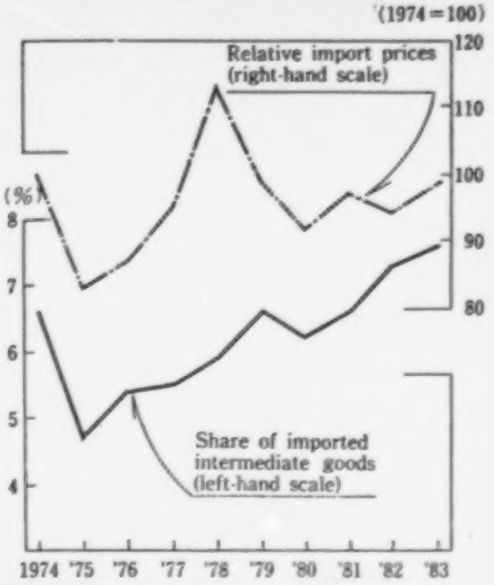
Notes:

1. The following identity equation was used to analyze the factors:
   $IMQ(IM) = GNP \cdot (IIP(K)/GNP) \cdot (C(K)/IIP(K) \cdot (IMQ(IM)/C(K))$
   Accordingly, $\dot{(IMQ(IM)/GNP)} = \dot{(IIP(K)/GNP)} + \dot{(C(K)/IIP(K))} + \dot{(IMQ(IM)/C(K))}$
   (where, IMQ(IM): import volume of intermediate goods
   GNP: real GNP
   IIP(K): production by processing industries
   C(K): consumption of raw materials by processing industries)
2. See Notes of Figure 5 for the description of import volume of intermediate goods and the processing industries.

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI), Annual Report on National Accounts (EPA).

Figure 7 Share of Imported Intermediate Goods and Relative Import Prices



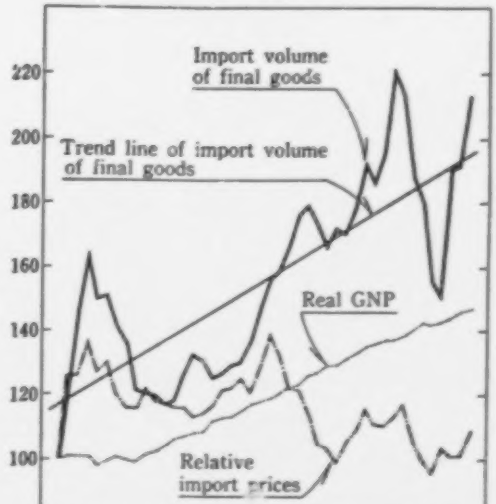
Notes:

1. The share is in real terms using 1980 prices.
2. Relative import prices = $\dfrac{\text{Domestic wholesale prices (intermediate goods)}}{\text{Yen-denominated import prices (intermediate goods)}}$

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Wholesale Price Indexes (Bank of Japan), Census of Manufacturers (MITI).

Figure 8 Trends in Import Volume of Final Goods (seasonally adjusted, 1973 I = 100)



Notes:

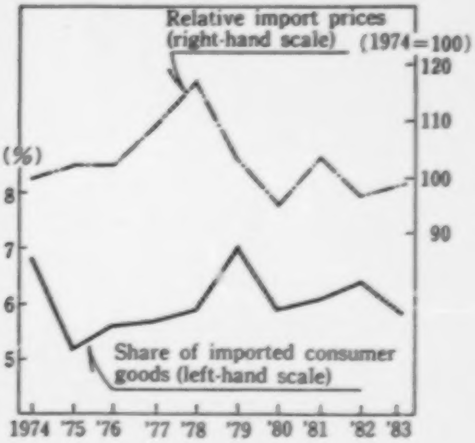
1. Import volume of final goods: Import volume of manufactured goods minus import volume of iron and steel, nonferrous metals, textiles and chemical products (weights are based on 1980 import value).
2. Relative import prices = $\dfrac{\text{Domestic wholesale prices (final goods)}}{\text{Yen-denominated import prices (final goods)}}$

Sources:

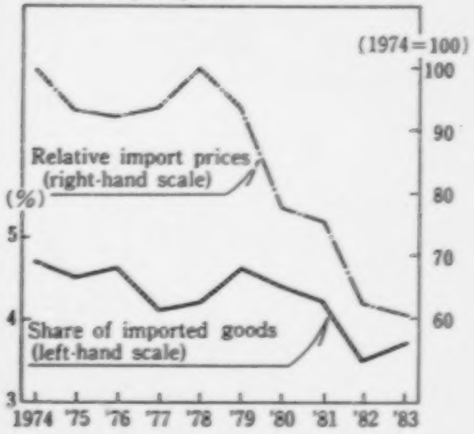
Summary Report on Trade of Japan (Japan Customs Association), Wholesale Price indexes (Bank of Japan), Annual Report on National Accounts (EPA).

Figure 9 Share of Imported Final Goods

(1) Share of imported consumer goods and relative import prices



(2) Share of imported capital goods and relative import prices



Notes:

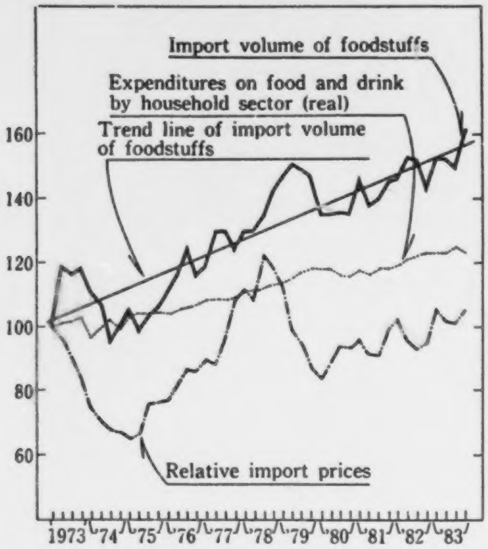
1. The share is in real terms using 1980 prices.
2. Relative import prices =

$$\frac{\text{Domestic wholesale prices (consumer goods, capital goods)}}{\text{Yen-denominated import prices (consumer goods, capital goods)}}$$

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Wholesale Price Indexes (Bank of Japan), Census of Manufacturers (MITI).

Figure 10 Trends in Import Volume of Foodstuffs (seasonally adjusted, 1973 I = 100)



Notes:

1. Relative import prices =

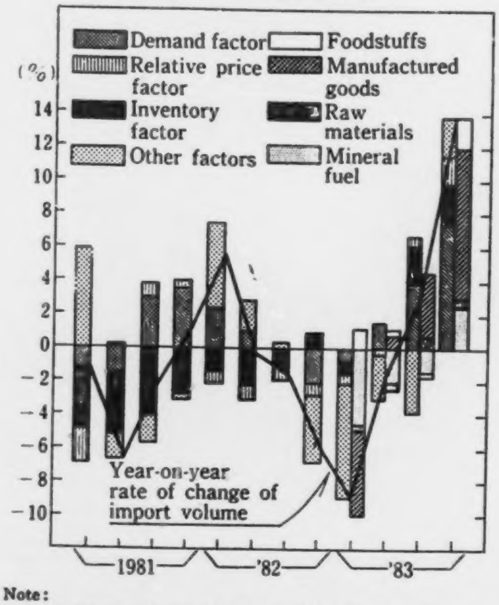
$$\frac{\text{Domestic wholesale prices (foodstuffs)}}{\text{Yen-denominated import prices (foodstuffs)}}$$

2. Real household sector expenditures on food and drink from the April–June quarter of 1983 have been estimated by the Research and Statistics Dept., Bank of Japan.

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Wholesale Price Indexes (Bank of Japan), Annual Report on National Accounts (EPA).

Figure 11 Factor Analysis of Changes in Import Volume (year-on-year comparison)



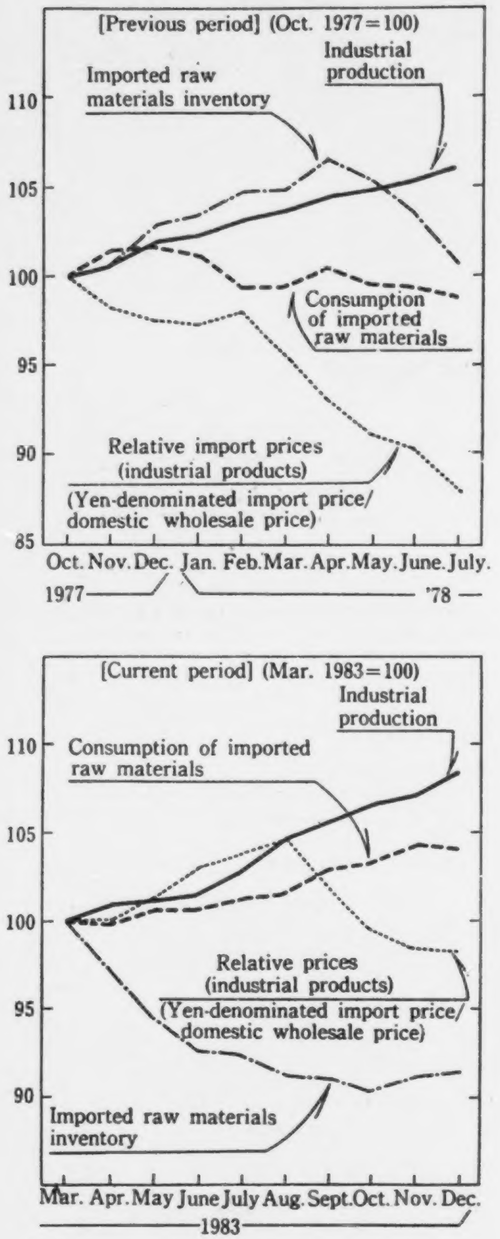
Note:

The import volume function in Appendix Note 3 was used in the factor analysis of demand and other factors.

Sources:

Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI), Wholesale Price Indexes (Bank of Japan).

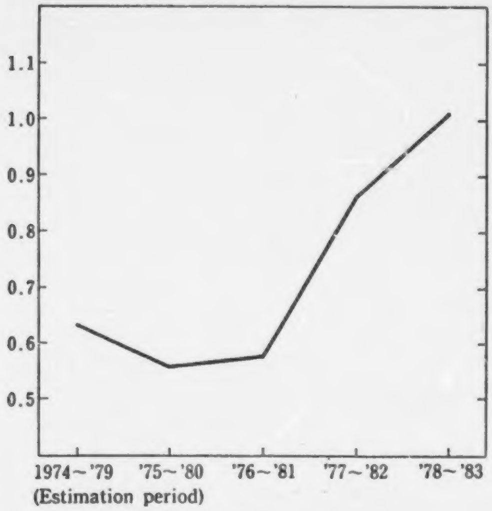
Figure 12 Comparison of Import Recovery Phases



Notes:
1. Seasonally adjusted, 3-month moving average.
2. Indexes in both periods were calculated by import volume in the month with the lowest volume of imports = 100.

Sources:
Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI), Wholesale Price Indexes (Bank of Japan).

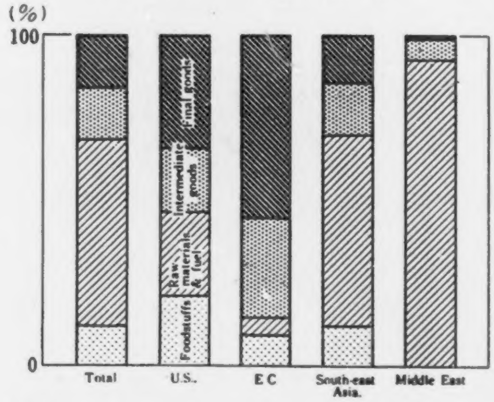
Figure 13 Price Elasticity of Imported Goods



Note:
This type of function is referred to in Appendix Note 3.

Sources:
Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI), Wholesale Price Indexes (Bank of Japan).

Figure 14 Percentage Composition of Import Value, by Region (1983)



Sources:
Summary Report on Trade of Japan, Monthly Report on Trade of Japan (Japan Customs Association).

Table 1 Price Elasticity of Import Volume, by Type of Goods

Import volume (total)	Raw materials & fuels	Manufactured goods	Intermediate goods
0.27	0.00	1.08	1.25

Note: See Appendix Note 3 for the description of the equation.

Sources: Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (Ministry of International Trade and Industry, hereafter MITI), Wholesale Price Indexes (Bank of Japan).

Table 2 Effect of Changes in Industrial Structure on Changes in Import Volume (Raw Materials and Fuels + Intermediate Goods) (1980-82)

(annual rate, %)

Total import volume (raw materials and fuels + intermediate goods)	Changes in industry share			Decreased inputs per unit of output			Influence of substitution of domestic intermediate goods by imported goods	(Influence of reduced imports of raw materials & fuels due to substitution of domestic intermediate goods by import goods)	Others (demand factor, etc.)
		Decreased share of materials industry	Increased share of processing industry		Materials industry	Processing industry			
△ 3.9	△ 5.3	△ 5.4	+ 0.1	△ 3.6	△ 2.0	△ 1.6	+ 1.0 (+ 4.0)	(△ 0.4 (△ 0.6))	+ 4.0

Notes: 1. See Notes to Figure 3 for the description of the materials industry and its import volume of raw materials and fuels, and see Notes to Figure 5 for the description of the processing industry and its import volume of intermediate goods.

2. The identity equations in Figures 4 and 6 were used for the contribution rate analysis. The influence of reduced imports of raw materials and fuels owing to the substitution of domestic intermediate goods by imported goods has been calculated by the following formula:

$$IMQ(R) = IIP^{*} \cdot \left(\frac{IIP(S)^{*}}{IIP^{*}}\right) \cdot \left(\frac{IIP(S)}{IIP(S)^{*}}\right) \cdot \left(\frac{C(S)}{IIP(S)}\right) \cdot \left(\frac{IMQ(R)}{C(S)}\right)$$

$IMQ(R)$: Import volume of raw materials and fuels.
IIP^{*} : Industrial production (if no substitution by imported intermediate goods had occurred).
$IIP(S)^{*}$: Industrial production (materials industry) (if no substitution by imported intermediate goods had occurred).
$IIP(S)$: Industrial production (materials industry).
$C(S)$: Consumption of raw materials (materials industry).

3. Figures in parentheses denote contribution rates of raw materials and fuels and intermediate goods to the respective changes in import volume.

Sources: Summary Report on Trade of Japan (Japan Customs Association), Industrial Statistics Monthly (MITI), Annual Report on National Accounts (Economic Planning Agency, hereafter EPA).

Table 3 Import Inducement Coefficients, by Final Demand Category

(1) Changes in import inducement coefficients, by final demand category

(%)

	1970	'75	'80	'82
Total final demand	11.78	10.30	10.28	9.91
Exports	15.67	14.67	11.66	10.79
Domestic demand	11.39	9.73	10.07	9.54

(2) Import inducement coefficients of exports by materials and processing industries and their shares in total export value

(%)

	1970	'75	'80	'82
Inducement coefficients				
Materials industries	24.9	24.7	20.5	20.1
Processing industries	12.0	10.0	8.7	8.2
Share in total exports				
Materials industries	33.3	30.9	24.7	21.7
Processing industries	41.0	46.9	56.8	60.0

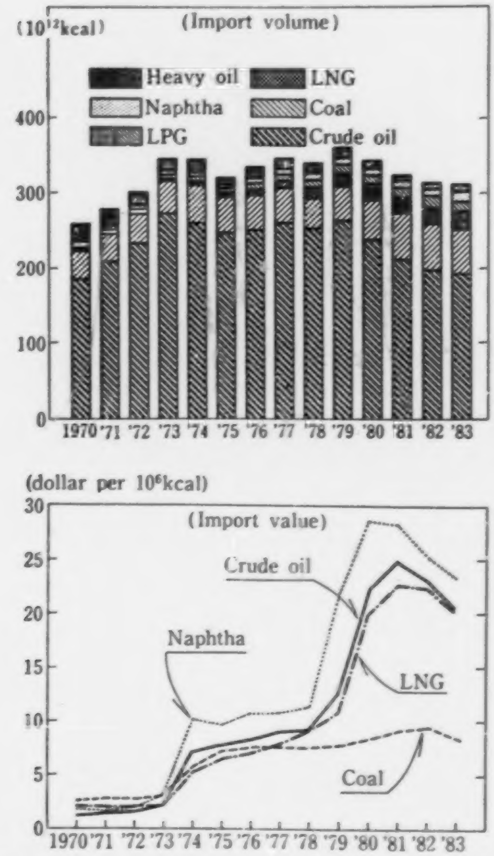
Note: Items in both (1) and (2) are estimated using 1975 prices.

Sources: Input and Output Tables for Linking 1970, and 1975 (Administrative Management Agency), The 1980 Input and Output Table (extension tables) (MITI), Nikkei Input and Output Tables for 1982 (Nihonkeizai Shimbun-sha).

〔Appendix Note 1〕

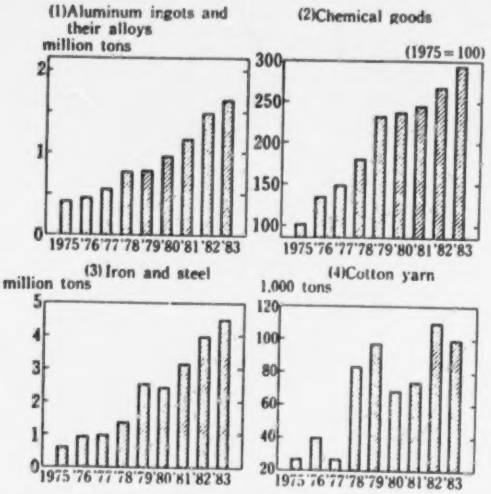
Plant and equipment investment in response to the large increase in raw materials and fuel prices aimed not only at reducing inputs per unit output, but also, in a number of cases, switching of fuels as a result of changes in the relative prices of fuels (e.g. the shift of energy source from oil to coal in the iron-steel and cement industries). The proportion of crude oil imports to total imports has decreased greatly in recent years due to its high price per calorie, while imports of relatively low-priced coal and LNG have risen.

Import Volume and Import Value of Fuels (in terms of kcal)



Sources:
Summary Report on Trade of Japan (Japan Customs Association), Energy Statistics (Agency of National Resources and Energy).

[Note 2] Import Volume of Major Intermediate Products



Source: Summary Report on Trade of Japan (Japan Customs Association).

[Note 3] Import Volume Functions, by Item (Estimation period 1978/I-'83/IV, t value in parentheses)

(Total volume of imports)

$$\ln[\text{Total volume of imports}] = \sum_{i=-1}^{0} a_i \ln[\text{Industrial production}] - \underset{(-2.76)}{0.23} \ln[\text{Inventory ratio of imported raw materials}_{-1}]$$

$$+ \sum_{i=-3}^{0} b_i \ln[\text{Yen-denominated import price (total)/domestic wholesale price (overall average)}]$$

$$+ \underset{(4.31)}{2.51}$$

	a_i
i = 0	0.48(6.50)
−1	0.48(6.50)
	0.95(6.50)

	b_i
i = 0	−0.05(−1.90)
−1	−0.07(−2.69)
−2	−0.08(−4.30)
−3	−0.07(−1.33)
	−0.27(−4.30)

$R^2=0.82$

D.W.=1.69

(Raw materials and fuels)

$$\ln[\text{Import volume of raw materials and fuels}] = \sum_{i=-1}^{0} c_i \ln[\text{Industrial production}] + \sum_{i=-5}^{0} d_i \ln[\text{Yen-denominated import price (raw-materials and fuels)}]$$

$$+ \sum_{i=-1}^{0} e_i \ln[\text{Input per unit output (materials industry)}] - \underset{(-1.64)}{0.24} \ln[\text{Inventory ratio of imported raw materials}_{-1}]$$

$$+ \underset{(0.65)}{1.40}$$

	c_i
i = 0	0.43(2.52)
−1	0.43(2.52)
	0.86(2.52)

	d_i
i = 0	0.00(0.55)
−1	0.00(0.55)
−2	0.00(0.55)
−3	0.00(0.55)
−4	0.00(0.55)
−5	0.00(0.55)
	0.00(0.55)

	e_i
i = 0	0.83(3.12)
−1	0.83(3.12)
	1.66(3.12)

$R^2=0.91$

D.W.=2.12

(Manufactured goods)

$$\ln\,[\text{Import volume of manufactured goods}] = \sum_{i=-1}^{0} f_i \ln[\text{Industrial production}] + \sum_{i=-3}^{0} g_i \ln[\text{Yen-denominated import price (manufactured goods)}/\text{domestic wholesale price (industrial products)}] - \underset{(-1.93)}{1.11}$$

$$\begin{array}{rl} & f_i \\ i=0 & 1.16(17.95) \\ -1 & 1.16(17.95) \\ \hline & 2.32(17.95) \end{array} \qquad \begin{array}{rl} & g_i \\ i=0 & -0.22(-7.75) \\ -1 & -0.32(-7.75) \\ -2 & -0.32(-7.75) \\ -3 & -0.22(-7.75) \\ \hline & -1.08(-7.75) \end{array} \qquad \begin{array}{l} R^2=0.94 \\ \\ D.W.=1.45 \end{array}$$

(Intermediate goods)

$$\ln\,[\text{Import volume of intermediate goods}] = \underset{(12.74)}{2.60} \ln\,[\text{Industrial production}] + \sum_{i=-4}^{0} h_i \ln\,[\text{Yen-denominated import price (intermediate goods)}/\text{domestic wholesale price (intermediate goods)}] - \underset{(-2.06)}{1.61}$$

$$\begin{array}{rl} & h_i \\ i=0 & -0.41(-2.89) \\ -1 & -0.16(-3.15) \\ -2 & -0.08(-0.95) \\ -3 & -0.17(-3.50) \\ -4 & -0.43(-3.34) \\ \hline & -1.25(-6.16) \end{array} \qquad \begin{array}{l} R^2=0.91 \\ \\ D.W.=1.71 \end{array}$$

Sources: Summary Report on Trade of Japan (Japan Customs Association), Wholesale Price Indexes (Bank of Japan), Industrial Statistics Monthly (MITI).

[Note 4]

Imports of Liberalized Goods

(In millions of yen, tons [except lemonade])

Items:	Imports were liberalized in:	Before liberalization (3-year average) (A)		After liberalization				Rate of increase			
				5-year overage (B)		Most recent (1983) (C)		(B)/(A)		(C)/(A)	
		Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Pork	'71/Oct.	10,097	23,428	67,559	103,825	153,027	166,253	times 6.7	times 4.4	times 15.2	times 7.1
Ham & bacon	'72/Apr.	79	163	1,786	2,293	258	219	22.6	14.1	3.3	1.3
Sausages	'71/June	67	123	746	1,231	622	954	11.1	10.0	9.3	7.8
Grapes	'71/Jan.	1	6	274	1,074	673	1,565	274.0	179.0	673.0	260.8
Grapefruits	'71/June	267	1,764	17,023	150,659	24,822	177,289	63.8	85 4	93.0	100 5
Tomato puree/paste	'72/Apr.	442	4,115	4,810	27,461	8,171	45,118	10.9	6.7	18.5	11.0
Pineapples	'71/June	1,499	26,880	3,277	55,900	9,190	101,987	2.2	2.1	6.1	3.8
Cake mix	'71/Jan.	10	28	35	114	73	424	3.5	4.1	7.3	15.1
Margarine	'70/Sept.	9	72	52	209	270	734	5.8	2.9	30.0	10.2
Lemonade	'71/June	13	kℓ 97	235	kℓ 840	1,542	kℓ 10,304	18.1	8.7	118.9	106.2
Tea	'71/June	3,193	5,128	5,219	7,825	6,318	8,886	1.6	1.5	2.0	1.3
Crackers	'71/Oct.	266	575	1,748	2,755	2,938	4,216	6.6	4.8	11.0	7.3
Chocolate	'71/Oct.	1,026	1,664	3,894	5,263	5,371	4,923	3.8	3.2	5.2	3.0
Total	—	16,969	—	106,658	—	213.275	—	6.3	—	12.6	—
Import value of foodstuffs	—	billion yen 905.6	—	billion yen 2,100.5	—	billion yen 3,539.1	—	2.3	—	3.9	—

Note: The import value of foodstuffs before liberalization is the 1969-'71 average, and the value after liberalization is the 1972-'76 average.

Source: Monthly Report on Trade of Japan (Japan Customs Association).

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JAPAN'S EXPANDING U.S. MANUFACTURING PRESENCE: 1984 UPDATE

Summary

Japanese businesses looking for ways to tap the enormous growth opportunities of the U.S. economy without triggering a protectionist backlash that might jeopardize existing market shares are increasingly opting for a common strategy: investing in domestic production facilities. In 1984 alone, 47 names were added to the roster of U.S. manufacturing companies owned wholly or in part by Japanese corporate investors. This expansion, the biggest single-year increase yet, boosted the year-end total of Japanese-affiliated manufacturers in the United States to 370, including 28 companies in which Japanese corporations have minority interests. More importantly, for workers in industries running the gamut from steel and motor vehicles to communications equipment and integrated circuits, it meant jobs -- at least 90,000 jobs.

Japan's 1984 Investments in U.S. Production Facilities

The Japanese corporate stake in the U.S. manufacturing sector, pegged by the Department of Commerce at $1.7 billion in 1983, expanded significantly last year as all the factors executives weigh in considering production here signaled invest. The strength and durability of the U.S. economic recovery exerted an enormous pull on Japanese manufacturers, whether first-time investors or established producers in this country. The continued appreciation of the yen through 1984's first half also gave Japanese corporations a greater incentive to invest since it both lowered the yen cost of building new plants or acquiring existing ones and improved the relative cost competitiveness of supplying the American market from onshore. At the same time, strong corporate earnings expanded the funds available for investment. Finally, the rising protectionist noise level in Washington convinced wavering Japanese companies to invest in U.S. production facilities to safeguard their market access.

The push and pull of these factors are evident in the results of the Japan Economic Institute's fifth annual survey of Japanese investment activity in the U.S. manufacturing sector. A record 39 majority-owned companies joined the ranks of domestic manufacturing concerns during 1984, eight more than the year before and well above 1982's recession-curtailed total of 21 such investments. Equally important, eight firms already turning out products in the United States started work on new plants or acquired additional factories, while a long list of other majority-owned manufacturers invested in capacity expansion at their existing facilities. Moreover, Japanese corporations, which had shied away from minority investments in American production firms in both 1982 and 1983, obtained shares of at least 10 percent but less than 50 percent in eight businesses last year.

New plant construction remained the preferred investment route for 1984's 39 majority-owned manufacturing companies, outnumbering acquisitions by a wide four-to-one margin. Newcomers, especially small and medium Japanese producers, almost uniformly decided to start from the ground up, in large part because their initial U.S. operations are limited to final assembly work. But even big Japanese corporations with manufacturing track records here -- companies like NEC Corp., Mitsubishi Electric Corp., Oki Electric Industry Co., Ltd., Kyocera Corp., Sumitomo Metal Industries, Ltd., Mitsubishi Corp. and Nissho Iwai Corp. -- took the "greenfield" approach.

The exceptions, while few in number, were notable. They included Minebea Co., Ltd. and Hitachi Metals, Ltd., two companies that have repeatedly used acquisitions to expand and diversify their U.S. manufacturing operations. More significantly, Nippon Kokan K.K., Japan's number-two steel maker, went the acquisition route to gain a U.S. production base, paying National Intergroup Inc. $292 million for a 50 percent interest in National Steel Corp. (see JEI Report No. 34B, August 31, 1984).

Newcomers and repeat investors alike also continued to opt in most cases for wholly owned U.S. production units rather than joint manufacturing ventures with American companies. Last year's two big breaks with this pattern -- NKK's investment in National Steel as well as Toyota Motor Corp.'s decision to assemble subcompact cars in partnership with General Motors Corp. (see JEI Report No. 1B, January 6, 1984) -- were unusual because they involved tie-ups between major competitors in international markets. Joint production ventures between leading American and Japanese corporations are not without precedent. At the same time, they do not represent the wave of the future, although there will undoubtedly be an increase in production tie-ups as the interests of American and Japanese manufacturers converge in more and more industries.

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Japan's Manufacturing Holdings in the United States: The New Count

At the end of 1984, Japanese corporate investors had a stake of 50 percent or more in 342 U.S. manufacturing companies, including 17 firms scheduled to go onstream later this year or in 1986. While small and medium-scale operations dot the list, an increasing number of companies qualify as big businesses, whether measured by sales, investment, employment or all three indicators. The biggest is also the newest: National Steel. This country's sixth-largest integrated producer with 1984 sales of $2.3 billion, National Steel employs 12,000 people at its three Midwestern mills. Running a close second is integrated aluminum manufacturer Alumax Inc., which reported sales of $1.5 billion two years ago. The company, in operation since 1974, is jointly owned by Mitsui & Co., Ltd., Nippon Steel Corp. and AMAX Inc. It has 94 plants and fabricating warehouses in 29 states and over 13,000 people on its payroll.

Other big ventures include the three Japanese automotive assembly plants in the United States. Honda of America Manufacturing, Inc. hit full production at its Ohio car plant in May 1984 and is now in the process of doubling capacity to 300,000 units a year. The new line, targeted for operation in 1986's second half, will add 500 workers to the company's 2,000 person work force. For its part, Nissan Motor Manufacturing Corp. U.S.A. is gearing up for late March 1985 car production at its Tennessee factory, where 2,100 workers are now turning out pickup trucks at an annual rate of 120,000 units. Employment is projected to increase to 3,000 people in 1986 as car output is raised to 100,000 units a year. New United Motor Manufacturing Inc., the Fremont, California-based joint venture between Toyota and GM, also expects to be in full operation next year, assembling approximately 200,000 cars annually with a work force of 2,500 people.

Some of the consumer electronics companies also number among the largest Japanese manufacturing operations in this country. Sony Corp. of America employs 1,600 at its San Diego, California color television plant, while the Alabama cassette tape factory operated by Sony Magnetic Products Inc. has 1,300 workers. Two manufacturers of color televisions and microwave ovens -- Sanyo Manufacturing Corp. and Matsushita Industrial Co. -- are big concerns as well, with Arkansas-based Sanyo employing 2,200 and Matsushita 1,350 at its facility in the Chicago, Illinois suburbs. Rounding out the list of major investments is Kyocera International, Inc., which has 2,000 employees at three plants in San Diego, California that make ceramic packages for integrated circuits and electronic components.

The 342 U.S. manufacturing companies in which Japanese investors owned a majority stake at year-end 1984 had 522 plants in operation or under construction at that time. California, home to 140 plants, including 17 built or acquired last year, remained the clear winner in the stiff state competition for Japanese investment. Texas continued to be the runner-up with 38 facilities. Six additional plants that boosted its total to 31 helped Georgia move into the number-three slot, bumping New Jersey, the location of 29 plants, into fourth place. Next on the list were Illinois and Washington, both of which had attracted 22 factories, followed by North Carolina, the site of 21 Japanese manufacturing operations, and Pennsylvania with 20 plants. Ohio moved into a tie for eighth place with Michigan as five new plants raised its total to 16. Other states that had attracted relatively large numbers of Japanese investors included Alaska (15), New York (15), Tennessee (14) and Indiana (12).

While company and plant data give some feel for the magnitude of Japan's corporate stake in the U.S. manufacturing sector, employment numbers are a much more illuminating indicator. The 325 majority-owned manufacturing concerns already in operation have approximately 89,000 people on their payrolls. Another 2,000 or so jobs will be generated when plants now under construction go onstream later this year or next, and several thousand others will open as established manufacturers complete their current expansion programs. With Japanese investors also creating or maintaining jobs by taking minority positions in 28 U.S. manufacturing companies, it is safe to say that at least 100,000 Americans will owe their jobs this year to Japanese-affiliated manufacturers in this country.

For further information, contact Susan MacKnight.

* * * * * *

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

JEI's Investment Survey

The Japan Economic Institute's study of U.S. manufacturing companies owned by or affiliated with Japanese investors was limited to firms that had plants in operation or under construction on December 31, 1984. This cut-off date eliminated a number of companies that had definite plans to build production facilities in the United States but had not broken ground by year end, as well as several acquisitions that had not been finalized.

The results of the 1984 update survey are contained in three appendices, which also include the information from the three previous updates. The main appendix gives, in alphabetical order, the full name of each U.S. manufacturing company owned wholly or in part by Japanese investors; the location of its plant or plants; the full name of what is known as the company's ultimate beneficial owner(s); the share of stock held by the owner(s); whether the company was a new investment or an acquisition; the company's major product line(s); the approximate or actual number of people employed by the company, if available; and when the company began production or, in the case of acquisitions, when the company was bought by Japanese investors. The second appendix presents a state-by-state listing of plant locations, while the third groups the products made in terms of four-digit Standard Industrial Classification codes.

A fourth appendix lists companies that have gone out of business and plants that have closed since the 1980 benchmark and the 1981-83 updates were published. This information was obtained from publicly available sources. No attempt was made to resurvey all the previously listed companies.

Note

The following appendices only include companies that have been added since the 1980 benchmark study was published. For a complete list of U.S. manufacturing companies owned by or affiliated with Japanese investors, it is necessary to consult the benchmark study as well as the attached appendices.

Appendix 1: Alphabetic Listing of U.S. Manufacturing Affiliates of Japanese Companies

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
ALCOA-NEC Communications Corp.	Sidney, OH	NEC Corp.	49%	New	Satellite television receiving systems	15	1982
		Aluminum Co. of America	51				
●ASTRONET Corp.	Lake Mary, FL	Mitsubishi Electric Corp.	49	New	Cellular mobile communications equipment	50	1984
		Plessey Co., Plc.	51				
ATR Wire and Cable Co.	Danville, KY	Tokyo Rope Manufacturing Co., Ltd.	60	Acquired	Steel cord/bead wire for tires	420	1981
		Mitsubishi Corp.	20				
		C. Itoh & Co., Ltd.	20				
Alloy Tool Steel Inc.	Santa Fe Springs, CA	Nissho Iwai Corp.	35	New	Steel processing	30	1974
		Nippon Koshuha Steel Co., Ltd.	35				
Alloy Tool Steel of Texas Inc.	Hutchins, TX	Nissho Iwai Corp.	18	New	Steel processing	5	1981
		Nippon Koshuha Steel Co., Ltd.	18				
Alpha Biochemical Corp.	Richland, WA	Kanegafuchi Chemical Industry Co., Ltd.	100	New	Binder for fish feed	20	1982
Alumax Inc.		Mitsui & Co., Ltd.	45	Acquired			1974
		Nippon Steel Corp.	5				
		AMAX Inc.	50				
Alumax Extrusions, Inc.	Catawaba, NC	Alumax Inc.	100	New	Aluminum extruded shapes	n.a.	1981
Alumax Fabricated Products, Inc.	Tempe, AZ	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1981
Alumax Fabricated Products, Inc.	Anaheim, CA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1981
Alumax Fabricated Products, Inc.	Sacramento, CA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1981
●Alumax Fabricated Products, Inc.	Alma, GA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket/mobile homes	n.a.	1984
●Alumax Fabricated Products, Inc.	Elkhart, IN	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket/mobile homes	n.a.	1984
●Alumax Mill Products, Inc.	Texarkana, TX	Alumax Inc.	100	New	Aluminum sheet	n.a.	1986*
Howmet Aluminum**	Rockwall, TX	Alumax Inc.	100	Acquired	Secondary aluminum slab/billet	n.a.	1983
Howmet Aluminum**	Philadelphia, PA	Alumax Inc.	100	Acquired	Recycled aluminum scrap	n.a.	1983
Howmet Aluminum**	Arlington, TX	Alumax Inc.	100	Acquired	Recycled aluminum scrap	n.a.	1983
Howmet Aluminum**	Houston, TX	Alumax Inc.	100	Acquired	Recycled aluminum scrap	n.a.	1983
Howmet Aluminum**	Hawesville, KY	Alumax Inc.	100	Acquired	Aluminum sheet/coil	n.a.	1983
Howmet Aluminum**	Lancaster, PA	Alumax Inc.	100	Acquired	Aluminum sheet/coil	n.a.	1983
Howmet Aluminum**	Atlanta, GA	Alumax Inc.	100	Acquired	Aluminum/copper/steel processing	n.a.	1983
Howmet Aluminum**	Fraser, MI	Alumax Inc.	100	Acquired	Aluminum/copper/steel processing	n.a.	1983
Howmet Aluminum**	Grand Rapids, MI	Alumax Inc.	100	Acquired	Aluminum/copper/steel processing	n.a.	1983
Howmet Aluminum**	Kansas City, MO	Alumax Inc.	100	Acquired	Aluminum/copper/steel processing	n.a.	1983
Howmet Aluminum**	Brecksville, OH	Alumax Inc.	100	Acquired	Aluminum/copper/steel processing	n.a.	1983
Howmet Aluminum**	Mesquite, TX	Alumax Inc.	100	Acquired	Aluminum/copper/steel processing	n.a.	1983
Howmet Aluminum**	Rockwall, TX	Alumax Inc.	100	Acquired	Aluminum extruded shapes	n.a.	1983
Howmet Aluminum**	Lakeland, FL	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983
Howmet Aluminum**	Tifton, GA	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983
Howmet Aluminum**	Elkhart, IN	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
Howmet Aluminum**	Hutchinson, KS	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983
Howmet Aluminum**	Sanford, NC	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983
Howmet Aluminum**	Leola, PA	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983
Howmet Aluminum**	Alvarado, TX	Alumax Inc.	100	Acquired	Aluminum products for mobile homes/ recreational vehicles	n.a.	1983
Howmet Aluminum**	Tucker, GA	Alumax Inc.	100	Acquired	Aluminum rain-carrying components/ other building products	n.a.	1983
Howmet Aluminum**	Lancaster, PA	Alumax Inc.	100	Acquired	Aluminum rain-carrying components/ other building products	n.a.	1983
Howmet Aluminum**	Grand Prairie, TX	Alumax Inc.	100	Acquired	Aluminum rain-carrying components/ other building products	n.a.	1983
Howmet Aluminum**	Vancouver, WA	Alumax Inc.	100	Acquired	Aluminum rain-carrying components/ other building products	n.a.	1983
Howmet Aluminum**	Cerritos, CA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1983
Howmet Aluminum**	Fremont, CA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1983
Howmet Aluminum**	Lithonia, GA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1983
Howmet Aluminum**	Bedford Park, IL	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket, aluminum rain-carrying components/other building products	n.a.	1983
Howmet Aluminum**	Kansas City, MO	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1983
Howmet Aluminum**	Harrisburg, PA	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1983
Howmet Aluminum**	Mesquite, TX	Alumax Inc.	100	Acquired	Aluminum products for housing aftermarket	n.a.	1983
Howmet Aluminum**	Hayward, CA	Alumax Inc.	100	Acquired	Aluminum bath enclosures	n.a.	1983
Howmet Aluminum**	Tucker, GA	Alumax Inc.	100	Acquired	Aluminum bath enclosures	n.a.	1983
Howmet Aluminum**	Dallas, TX	Alumax Inc.	100	Acquired	Aluminum bath enclosures	n.a.	1983
Howmet Aluminum**	Dallas, TX	Alumax Inc.	100	Acquired	Aluminum products for commercial remodeling	n.a.	1983
Howmet Aluminum**	Leola, PA	Alumax Inc.	100	Acquired	Aluminum garage doors	n.a.	1983
Howmet Aluminum**	Magnolia, AR	Alumax Inc.	100	Acquired	Aluminum spectator seating, scaffolding, ceiling grid systems, custom fabricated work	n.a.	1983
Kawneer Co., Inc.	Springdale, AR	Alumax Inc.	100	New	Architectural aluminum products	n.a.	1981
Kawneer Co., Inc.	Aurora, CO	Alumax Inc.	100	New	Architectural aluminum products	n.a.	1983
Kawneer Co., Inc.	Cleveland, OH	Alumax Inc.	100	Acquired	Architectural aluminum products	n.a.	1974
Kawneer Co., Inc.	Houston, TX	Alumax Inc.	100	New	Architectural aluminum products	n.a.	1982
Amano-International Enzyme Co., Inc.	Troy, VA	Amano Pharmaceutical Co., Ltd.	47.5	New	Enzymes	7	1981
		Boehringer International Enzyme Inc.	47.5				
American Foods Corp.	Gardena, CA	Nakano Vinegar Co., Ltd.	100	Acquired	Vinegar	75	1983
American Foods Corp.	Guasti, CA	Nakano Vinegar Co., Ltd.	100	Acquired	Vinegar, cooking wines		1981
American Foods Corp.	San Francisco, CA	Nakano Vinegar Co., Ltd.	100	Acquired	Vinegar, cooking wines, sauces		1981
American Foods Corp.	Watsonville, CA	Nakano Vinegar Co., Ltd.	100	Acquired	Vinegar		1981

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•Amitech Inc.	Marietta, GA	Mitsui & Co., Ltd. Nypro Inc.	50 50	New	Plastic parts for electronics industry/medical uses	80	1981
Amsnack, Inc.	Stockton, CA	Chuoken Sembei Inc.	100	New	Rice crackers	11	1981
•Ando Screen Inc.	North Canton, OH	Ando Screen Co., Ltd.	100	New	Screening equipment for liquid-solid separation	15	1985
Bellemar Parts Industries Inc.	Marysville, OH	Honda Motor Co., Ltd. Sankei Giken Kogyo Co., Ltd. Tokyo Seat Co., Ltd.	80 10 10	New	Automotive/motorcycle seats, wheels	170	1982
•Bellemar Parts Industries Inc.	Russells Point, OH	Honda Motor Co., Ltd. Sankei Giken Kogyo Co., Ltd. Tokyo Seat Co., Ltd.	80 10 10	New	Automotive exhaust systems, catalytic converters, brake lines, door sashes	140*	1985*
Bering Sea Fisheries, Inc.	Mouth of Yukon, AK	Marubeni Corp.	25	Acquired	Frozen fish	40	1972
Bio Kyowa Inc.	Cape Girardeau, MO	Kyowa Hakko Kogyo Co., Ltd.	100	New	Lysine (feedstuff amino acid additive)	70	1984
Bridgestone Tire Manufacturing (U.S.A.), Inc.	LaVergne, TN	Bridgestone Corp.	100	Acquired	Radial truck/bus tires	900	1982
Bunmeido of Hawaii Ltd.	Honolulu, HI	Bunmeido Confectionery Co., Ltd.	100	New	Bakery products	8	1965
CTY Corp.	San Marcos, CA	Taiyo Yuden Co., Ltd.	100	New	Axial capacitors	40	1981
•California Steel Industries Inc.	Fontana, CA	Kawasaki Steel Corp. Cia Vale do Rio Doce S.A.	25 25	Acquired	Hot-rolled, cold-rolled/galvanized steel sheets/coils, hot-rolled steel plates	525	1984
Calsonic Manufacturing Corp.	Shelbyville, TN	Nihon Radiator Co., Ltd.	100	New	Automotive air conditioners, exhaust assemblies	200	1983
•Cape Cod Potato Chips	Hyannis, MA	Kirin Brewery Co., Ltd.	25	Acquired	Potato chips	10	1984
Caribe Isoprene Corp.	Penuelas, PR	Nippon Zeon Co., Ltd. Mitsubishi Corp.	50 40	New	Isoprene monomer, dicyclopentadiene, piperylene	50	1975
Cast Forge Co.	Howell, MI	Nippon Light Metal Co., Ltd. Kelsey-Hayes Co.	20 80	Acquired	Aluminum wheels/other die-cast automotive parts	100	1982
•Chateau St. Jean	Kenwood, CA	Suntory Ltd.	100	Acquired	Wine	90	1984
Chickasha Cotton Oil Co.	Casa Grande, AZ	Toyo Menka Kaisha, Ltd.	100	Acquired	Cottonseed oil	70	1981
Chickasha Cotton Oil Co.	Clinton, OK	Toyo Menka Kaisha, Ltd.	100	Acquired	Cottonseed oil	70	1981
Chickasha Cotton Oil Co.	Harlingen, TX	Toyo Menka Kaisha, Ltd.	100	Acquired	Cottonseed oil	70	1981
Chickasha Cotton Oil Co.	Lamesa, TX	Toyo Menka Kaisha, Ltd.	100	Acquired	Cottonseed oil	70	1981
Clarion Corp. of America	Nashville, TN	Clarion Co., Ltd.	100	New	Automotive radio combinations	3	1983
Coca-Cola Bottling Co.	Salem, NH	Kirin Brewery Co., Ltd.	100	Acquired	Soft drinks	187	1982
•CoilPlus, Inc.	Athens, AL	Mitsubishi Corp.	100	New	Steel processing	50*	1985*
Concise Casting Corp.	Hayward, CA	Hitachi Metals, Ltd.	100	Acquired	Aluminum castings	95	1981
Cryodynamics Co.-Ebara Group	Sacramento, CA	Ebara Corp.	70	New	Pumps for low-temperature liquids	30	1984
•Curtis-Maruyasu America, Inc.	Tracy, CA	Maruyasu Industries Co., Ltd. Curtis Products, Inc.	50 50	New	Automotive fuel line/hydraulic brake assemblies	25*	1985*
Daiichiya Love's Bakery Inc.	Honolulu, HI	Daiichiya Baking Co., Ltd.	100	Acquired	Bakery products	240	1981
•Dainippon Screen Engineering of America Inc.	Santa Ana, CA	Dainippon Screen Mfg. Co., Ltd.	100	New	Electronic page makeup systems/color scanners for graphic arts industry	20	1984

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Daiwa Golf Co.	Gardena, CA	Daiwa Seiko, Inc.	100	New	Golf clubs	20	1981
Data Ray Corp.	Boulder, CO	Nippon Chemi-Con Corp.	75	Acquired	CRT display modules	50	1983
Diamond Plastics Corp.	Grand Island, NE	Mitsubishi Corp.	100	Acquired	Polyvinyl chloride pipes	115	1982
Diamond Plastics Corp.	Lubbock, TX	Mitsubishi Corp.	100	Acquired	Polyvinyl chloride pipes		1982
Digital Audio Disc Corp.	Terre Haute, IN	Sony Corp.	50	New	Digital audio discs	200	1984
		CBS Inc.	50				
Dutch Harbor Seafoods Co., Inc.	Dutch Harbor, AK	Nippon Suisan Kaisha Ltd.	25	New	Frozen fish	100	1976
•Eaton Auto Products Manufacturing Inc.	Eaton, OH	Nihon Plast Co., Ltd.	100	New	Automotive steering wheels	40*	1985*
Economic Salon, Ltd.	New York, NY	Keizai Salon Co., Ltd.	100	New	Periodicals publishing	10	1971
Enway Inc.	Clackamas, OR	Restaurant Skylark Co., Ltd.	51	New	Frozen potato products	10	1982
FEC Inc.	Madison Heights, MI	Dai-Ichi Dentsu Co., Ltd.	100	New	Electronic fastening systems	25	1983
First Metals, Inc.	Houston, TX	Toyo Menka Kaisha, Ltd.	100	New	Steel processing	22	1978
Forman Industries Inc.	Hayward, CA	Kawasho Corp.	100	Acquired	Sheet-metal ducts	35	1979
Fotomat Corp.	St. Louis, MO	Konishiroku Photo Industry Co., Ltd.	20	Acquired	Photographic chemicals	30	1982
Fotomat Corp.	Springdale, OH	Konishiroku Photo Industry Co., Ltd.	20	Acquired	Kiosks	10	1982
Fuji Cone Inc.	Clinton, NC	Fuji Cone Works Ltd.	50	New	Paper cones for stereo speakers	85	1981
		International Jensen Inc.	50				
Fuji Foods Inc.	Browns Summit, NC	Fuji Foods Corp.	100	New	Beef/chicken extracts for soup stocks	16	1983
Fuki Koki America Inc.	Dallas, TX	Fuji Koki Mfg. Co., Ltd.	100	New	Expansion valves for automotive air conditioning systems	32	1982
Fujitec Industries, Inc.	Lebanon, OH	Fujitec Co., Ltd.	100	New	Elevators, escalators	100	1983
Fujitsu America, Inc.	Palm Bay, FL	Fujitsu, Ltd.	100	New	Cable assemblies, power supply units/related components for computers/peripheral equipment	50	1983
Fujitsu America, Inc.	Richardson, TX	Fujitsu, Ltd.	100	New	Cellular mobile/fiber-optic communications equipment, multiplexers, microwave radios	150	1984
Halco Fence & Wire Co.	Dallas, TX	C. Itoh & Co., Ltd.	100	Acquired	Chain link	200	1980
•Heartland Lysine, Inc.	Eddyville, IA	Ajinomoto Co., Inc.	50	New	Lysine (feedstuff amino acid additive)	50*	1986*
		Orsan S.A.	50				
•Hemlock Semiconductor Corp.	Hemlock, MI	Shin-Etsu Handotai Co., Ltd.	24.5	Acquired	Polycrystalline silicon	225	1984
		Mitsubishi Metal Corp.	12.25				
		Dow Corning Corp.	63.25				
High Voltage Breakers, Inc.	Norcross, GA	Hitachi, Ltd.	67	New	Circuit breakers for power plants/transmission lines	15	198[illegible]
		General Electric Co.	33				
•Hirose Electric (U.S.A.), Inc.	Chatsworth, CA	Hirose Electric Co., Ltd.	100	New	Connectors	2*	1985*
•Hitachi Chemical Co. America, Inc.	De Kalb, GA	Hitachi Chemical Co., Ltd.	100	New	Multiwire boards	60*	1985*
Hitachi Consumer Products of America Inc.	Anaheim, CA	Hitachi, Ltd.	100	New	Color television sets	400	1982
Hi-Tek Corp.	Garden Grove, CA	Minebea Co., Ltd.	100	Acquired	Computer keyboards	130	1983
•Honda of America Mfg., Inc.	Anna, OH	Honda Motor Co., Ltd.	100	New	Motorcycle engines	150*	1985*

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
Honda Power Equipment Manufacturing Inc.	Swepsonville, NC	Honda Motor Co., Ltd.	100	New	Lawnmowers	80	1984
Honma Golf, Inc.	Honolulu, HI	Honma Corp.	100	New	Golf clubs	36	1978
House Foods and Yamauchi Inc.	Los Angeles, CA	House Food Industrial Co., Ltd.	50	Acquired	Tofu/related soybean products	40	1983
IDEC Systems & Controls Corp.	Santa Clara, CA	Izumi Denki Corp.	100	New	Relays, sockets, switches/other electrical industrial components	70	1975
IKS American Corp.	Gardena, CA	Izumoto Seiko Co., Ltd.	100	New	Ball bearings	18	1974
IMC Magnetics Corp.	Westbury, NY	Minebea Co., Ltd.	100	Acquired	Fans/blowers for communications/ computer equipment	n.a.	1974
International Leadframe Corp.	Sunnyvale, CA	Mitsui Mfg. Co., Ltd.	100	New	Lead frames for integrated circuits	21	1980
•International Light Metals Corp.	Torrance, CA	Nippon Kokan K.K.	40	Acquired	Aluminum/titanium bars, extrusions/ forgings	1,750	1985
		Martin Marietta Corp.	60				
International Titanium Inc.	Moses Lake, WA	Ishizuka Research Institute	50	New	Titanium sponge	120	1982
		Mitsui & Co., Ltd.	30				
•Iwatsu America Inc.	Carlstadt, NJ	Iwatsu Electric Co., Ltd.	100	New	Key telephone systems	n.a.	1984
Japan Aircraft Maintenance (America), Inc.	Mukilteo, WA	New Japan Aircraft Maintenance Co., Ltd.	100	New	Aircraft interior equipment	5	1982
•KTH Parts Industries Inc.	St. Paris, OH	Kikuchi Press Kogyo Co., Ltd. Takao Kinzoku Kogyo Co., Ltd. Hirata Press Kogyo Co., Ltd. Hongo Seisakusho Co., Ltd.	100	New	Automotive stamped/welded internal structural components	150*	1985*
Kaga USA Inc.	Fountain Valley, CA	Kaga Tsushin Kogyo Co., Ltd.	100	New	Lead frames/other metal parts for integrated circuits	10	1982
•Kameyama U.S.A. Inc.	Fall River, MA	MAS Co., Ltd.	Majority share	New	Candles	15	1985
Kaneka Texas Corp.	Bayport, TX	Kanegafuchi Chemical Industry Co., Ltd.	100	New	Methyl methacrylate-butadiene-styrene resins	80	1984
•Kantus Corp.	Lewisburg, TN	Kanto Seiki Co., Ltd.	100	New	Automotive plastic instrument panels, radiator grilles, console boxes/bumpers	100*	1985*
Kato Spring Inc.	Huntington Beach, CA	Kato Spring Works Co., Ltd.	100	New	Precision springs	10	1983
Kato Spring of Georgia Inc.	Norcross, GA	Kato Spring Works Co., Ltd.	100	New	Precision springs	8	1982
Kel-Am, Inc.	Elkton, MD	Kel Corp.	100	New	Connectors	85	1978
Kibun Corp. of North Carolina	Raleigh, NC	Kibun Co., Ltd.	100	New	Frozen seafood	16	1984
Kibun Corp. of Washington	Redmond, WA	Kibun Co., Ltd.	100	New	Frozen seafood	44	1983
Kikusui International Corp.	Gardena, CA	Kikusui Electronics Corp.	100	New	Oscilloscopes	20	1983
•Kubota Tractor Corp.	Norcross, GA	Kubota, Ltd.	100	New	Farm tractors	6	1984
•Kyocera Northwest Inc.	Vancouver, WA	Kyocera Corp.	100	New	Ceramic capacitors	250*	1985*
Lafayette Metal Service Corp.	Long Beach, CA	C. Itoh & Co., Ltd.	81	Acquired	Steel processing	60	1982
		Nuova Italsider S.p.A.	19				
LeBlond Makino Machine Tool Co.	Cincinnati, OH	Makino Milling Machine Co., Ltd.	51	Acquired	Numerically controlled lathes, machining centers, numerical controls	950	1981
		LeBlond Inc.	49				

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
●LyphoMed Inc.	Melrose Park, IL	Fujisawa Pharmaceutical Co., Ltd.	22.5	Acquired	Injectable drugs	425	1985
MCI Inc.	Fort Lauderdale, FL	Sony Corp.	100	Acquired	Recording studio equipment	384	1982
MCI Optinix Inc.	Morristown, NJ	Mitsubishi Chemical Industries, Ltd.	100	Acquired	X-ray intensifying screens for medical use	15	1981
Machine Specialties Co.	Lincoln, RI	Bando Chemical Industries, Ltd.	100	Acquired	Pulleys	30	1979
●Maruhachi Ceramics of America	Corona, CA	Maruhachi Ceramics Co., Ltd.	100	New	Roofing tiles	30*	1985*
Master Fence Fittings Inc.	La Habra, CA	C. Itoh & Co., Ltd.	100	Acquired	Fittings for metal fencing	300	1977
Matheson Gas Products Inc.	Cucamonga, CA	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	Newark, CA	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	Morrow, GA	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	Joliet, IL	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	Gonzales, LA	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment	400	1983
Matheson Gas Products Inc.	Gloucester, MA	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	E. Rutherford, NJ	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	Twinsburg, OH	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
Matheson Gas Products Inc.	La Porte, TX	Nippon Sanso K.K. UGI Corp.	50 50	Acquired	Specialty gases, specialty gas handling equipment		1983
●Matsushita Communication Co.	Franklin Park, IL	Matsushita Communication Industrial Co., Ltd.	100	New	Cellular mobile communications equipment	24	1984
Matsushita Electric Components Co.	Palo Alto, CA	Matsushita Electric Industrial Co., Ltd.	100	New	Integrated circuits	35	1983
Matsushita Electric of Puerto Rico, Inc.	Caguas, PR	Matsushita Electric Industrial Co., Ltd.	100	New	Stereo speakers, record changers, speaker boxes, motors for phonographs/audio equipment	720	1965
Megatool Inc.	Buena Park, CA	Union Tool Co., Ltd.	51	New	Carbide drills	17	1982
Memorex DIC Corp.	Santa Clara, CA	Dainippon Ink & Chemicals Inc. Burroughs Corp.	43 57	Acquired	Toner/developer for copiers, duplicators/printers	35	1981
●Metco America Inc.	Mobile, AL	Mitsubishi Rayon Co., Ltd. M&T Chemicals Inc.	Minority share Majority share	New	Impact modifiers for plastics industry	60*	1985*
Mitsubishi Foods Inc.	Ponce, PR	Mitsubishi Corp.	100	Acquired	Canned fish	500	1981
●Mitsubishi Semiconductor America Inc.	Durham, NC	Mitsubishi Electric Corp.	100	New	Integrated circuits	250	1985
Mitutoyo Corp.	City of Industry, CA	Mitutoyo Mfg. Co., Ltd.	100	New	Calipers, micrometers	30	1979
●Musashi USA Inc.	Battle Creek, MI	Musashi Precision Industry Co., Ltd.	100	New	Automotive arm bushing/joint assemblies	3*	1985*

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NEC America, Inc.	Hawthorne, CA	NEC Corp.	100	New	Cellular mobile communications equipment, mobile paging devices	120	1975
•NEC America, Inc.	Hillsboro, OR	NEC Corp.	100	New	Fiber-optic communications equipment	300*	1985*
NEC Electronics U.S.A. Inc.	Roseville, CA	NEC Corp.	100	New	Integrated circuits	200	1984
•NEC Home Electronics (U.S.A.) Inc.	McDonough, GA	NEC Corp.	100	New	Color television sets	100*	1985*
NEC Information Systems Inc.	Boxborough, MA	NEC Corp.	100	New	Computers/peripheral equipment	500	1983
NKK Switches of America, Inc.	Scottsdale, AZ	Nihon Kaiheiki Industries Co., Ltd.	Majority share	New	Electric/electronic switches	10	1983
•NSG America Inc.	Somerset, NJ	Nippon Sheet Glass Co., Ltd.	100	New	Fiber-optic lens	15*	1985*
•National Steel Corp.	Granite City, IL	Nippon Kokan K.K. National Intergroup Inc.	50 50	Acquired	Steel slabs/hot-rolled, cold-rolled/coated steel sheets	12,000	1984
•National Steel Corp.	Portage, IN	Nippon Kokan K.K. National Intergroup Inc.	50 50	Acquired	Cold-rolled, coated/tin-plate steel sheets		1984
•National Steel Corp.	Ecorse, MI	Nippon Kokan K.K. National Intergroup Inc.	50 50	Acquired	Steel slabs/hot-rolled/cold-rolled steel sheets		1984
Neptune Packing Corp.	Mayaquez, PR	Mitsui & Co., Ltd.	100	Acquired	Canned fish	500	1973
•New United Motor Manufacturing Inc.	Fremont, CA	Toyota Motor Corp. General Motors Corp.	50 50	New	Cars, automotive body stampings	800	1984
Nichimo Northwest, Inc.	Everson, WA	Nichimo Co., Ltd. Northwest Net & Twine, Inc.	70 30	New	Gill nets	20	1982
•Nidec Torin Corp.	Torrington, CT	Nippon Densan Corp.	100	Acquired	Small horsepower fans for computer motors	200	1984
Nidek Inc.	Palo Alto, CA	Nidek Co., Ltd.	100	New	Auto-refractometers, photocoagulators/other ophthalmologic instruments	4	1983
Niitakaya USA Inc.	Los Angeles, CA	Niitakaya Co., Ltd.	100	Acquired	Pickles	10	1983
Nikko Wolverine Inc.	Dearborn Heights, MI	Nippon Mining Co., Ltd. C. Itoh & Co., Ltd. UOP Inc.	51 29 20	Acquired	Titanium/zirconium tubes/pipe	60	1981
Nintendo of America, Inc.	Seattle, WA	Nintendo Co., Ltd.	100	New	Video game machines	50	1982
Nippondenso Sales, Inc.	Battle Creek, MI	Nippondenso Co., Ltd.	100	New	Automotive windshield washers/heaters	40	1983
•Nisco Steel Services Inc.	Memphis, TN	Nissho Iwai Corp.	100	New	Steel processing	30	1984
•Nisshin Gulf Coast Inc.	Houston, TX	Nisshin Chemical Industry Co., Ltd. EGC Corp.	50 50	New	Custom fluoropolymer linings for corrosion resistance	n.a.	1984
•Nitto Denko America, Inc.	Santa Clara, CA	Nitto Electric Industrial Co., Ltd.	100	New	Membrane modules for recovery of electrodeposited paint	1	1984
North American Brine Resources	Kingfisher County, OK (three sites)	United Resources Industry Co., Ltd. Mitsui & Co., Ltd. Beard Oil Co.	50 10 40	New	Iodine	5	1982
North American Lighting, Inc.	Flora, Il	Koito Manufacturing Co., Ltd. Ichikoh Industries Ltd. Westfalische Metal Industrie AG	39 10 51	New	Automotive lighting equipment	33	1983

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North Pacific Processors Inc.	Cordova, AK	Marubeni Corp.	100	New	Canned/frozen fish	450	1972
North Pacific Processors Inc.	Kenai, AK	Marubeni Corp.	100	New	Canned/frozen fish		1972
North Pacific Processors Inc.	Kodiak, AK	Marubeni Corp.	100	New	Canned/frozen fish		1972
Nutrius Inc.	Van Buren, AR	Mitsui & Co., Ltd.	100	Acquired	Feed additives	200	1981
•Nutrius Inc.	Cypress, CA	Mitsui & Co., Ltd.	100	Acquired	Feed additives		1984
Nutrius Inc.	Fresno, CA	Mitsui & Co., Ltd.	100	Acquired	Feed additives		1981
•Nutrius Inc.	Kingsburg, CA	Mitsui & Co., Ltd.	100	Acquired	Feed additives		1984
Nutrius Inc.	Manson, IA	Mitsui & Co., Ltd.	100	Acquired	Feed additives		1983
Nutrius Inc.	Louisville, KY	Mitsui & Co., Ltd.	100	Acquired	Feed additives		1981
Oak-Mitsui, Inc.	Hoosick Falls, NY	Mitsui Mining & Smelting Co., Ltd.	20	New	Electro-deposited copper foil	165	1976
		Oak Industries Inc.	80				
Okabashi (U.S.) Corp.	Buford, GA	Okabashi Co., Ltd.	Minority share	New	Men's/women's sandals/other footwear	20	1982
Oki America Inc.	Norcross, GA	Oki Electric Industry Co., Ltd.	100	New	Electronic private branch exchanges, cellular mobile communications equipment	150	1984
•Oki Semiconductor Inc.	Sunnyvale, CA	Oki Electric Industry Co., Ltd.	100	New	Integrated circuits	30	1984
Olympic Wood Products Inc.	Shelton, WA	Takeuchi Lumber Co., Ltd.	50	New	Lumber	15	1982
		Kanda Corp.	40				
		Aika Kogyo Co., Ltd.	10				
•Omega Tube and Conduit Corp.	Little Rock, AR	Sumitomo Metal Industries, Ltd.	80	New	Welded steel tubing	150*	1985*
		Sumitomo Corp.	10				
		Quality Metals Inc.	10				
Orange Bakery Inc.	Irvine, CA	Rheon Automatic Machinery Co., Ltd.	100	New	Bakery products	50	1979
•Orange Bakery Inc.	Irvine, CA	Rheon Automatic Machinery Co., Ltd.	100	New	Bakery products	15*	1985*
Orient Shimazaki Chemical Corp.	Newark, NJ	Shimazaki Corp.	n.a.	New	Nigrosine (black dye)	n.a.	1981
		Orient Chemical Industries Co., Ltd.	n.a.				
Pacific Propeller, Inc.	Kent, WA	Minebea Co., Ltd.	100	Acquired	Aircraft propellers	95	1982
•Pasco Corp. of America	Torrance, WA	Shikishima Baking Co., Ltd.	85	New	Bakery products	28	1984
		Nissho Iwai Corp.	15				
Pearl International Corp.	Nashville, TN	Pearl Musical Instrument Co.	100	New	Musical drums	45	1979
Peter Pan Seafoods Inc.	Dillingham, AK	Nichiro Gyogyo Kaisha, Ltd.	100	Acquired	Canned fish	90	1979
Peter Pan Seafoods Inc.	King Cove, AK	Nichiro Gyogyo Kaisha, Ltd.	100	Acquired	Canned/frozen fish	290	1979
Peter Pan Seafoods Inc.	Port Moller, AK	Nichiro Gyogyo Kaisha, Ltd.	100	Acquired	Frozen fish	120	1979
Pioneer Video, Inc.	Carson, CA	Pioneer Electronic Corp.	100	Acquired	Video discs	150	1982
Pyr Coat Inc.	Houston, TX	Mitsui & Co., Ltd.	60	Acquired	Fireproof coatings, fireproof insulation/adhesives, asbestos encapsulation/removal products	5	1983
Rakuyo Ken U.S.A. Inc.	Honolulu, HI	Rakuyo Shokuhin Co., Ltd.	100	New	Shumai	8	1981
•Rion Acoustic Instruments, Inc.	Torrance, CA	Rion Co., Ltd.	100	New	Custom-designed hearing aids	3	1984

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
S & B International Corp.	Torrance, CA	S & B Shokuhin Co., Ltd.	100	New	Seasoning mixes	4	1975
SDS Biotech Corp.	Princeton, NJ	Showa Denko K.K. Diamond Shamrock Corp.	50 50	Acquired	Animal health products	1,000	1983
SDS Biotech Corp.	Greens Bayou, TX	Showa Denko K.K. Diamond Shamrock Corp.	50 50	Acquired	Agricultural chemicals		1983
SMK Manufacturing Inc.	Placentia, CA	Showa Musen Kogyo Co., Ltd.	100	Acquired	Connectors	100	1981
Sanoh Manufacturing Corp.	San Diego, CA	Sanoh Industrial Co., Ltd. Sanyo Electric Co., Ltd.	80 20	New	Refrigerator parts	27	1981
•Scripto Tokai Inc.	Doraville, GA	Tokai Seiki Co., Ltd.	100	Acquired	Writing instruments	325	1984
Shindo International, Inc.	New York, NY	Shindo Shashin Seikan K.K.	100	New	Color separation, offset printing	n.a.	1978
Shinko Electric America Inc.	Manteca, CA	Shinko Electric Co., Ltd.	100	New	Lead frames for integrated circuits	34	1983
Sierracin Glass Transparencies Inc.	Sylmar, CA	Asahi Glass Co., Ltd. Sierracin Corp.	50 50	New	Glass transparencies for aircraft	50	1982
Sony Magnetic Products Inc. of America	Laredo, TX	Sony Corp.	100	New	Audio cassette tapes	48	1979
Southern Metal Service, Inc.	Gulfport, MS	Kanematsu-Gosho, Ltd.	100	New	Steel processing	35	1973
Stanley Electric U.S. Co., Inc.	London, OH	Stanley Electric Co., Ltd.	100	New	Automotive/motorcycle lighting equipment	60	1982
•Sumitomo Electric Research Triangle, Inc.	Research Triangle, NC	Sumitomo Electric Industries, Ltd.	100	New	Fiber-optic cables	200	1985
•Sumitomo Metal Mining California Corp.	Fremont, CA	Sumitomo Metal Mining Co., Ltd.	100	New	Lead frames for integrated circuits	100*	1985*
•Systems Magnetic Co.	Anaheim, CA	Hitachi Metals, Ltd.	100	Acquired	Voice coil motors for computer disk drives	210	1984
•TNS Mills, Inc.	Eufaula, AL	Tsuzuki Spinning Co., Ltd.	100	Acquired	Cotton yarn	150	1985
TNS Mills, Inc.	Spartanburg, SC	Tsuzuki Spinning Co., Ltd.	100	New	Cotton-blend sheeting, polyester-cotton blend yarn	170	1982
TYK Swank Refractories Co.	Irvona, PA	Tokyo Yogyo Co., Ltd.	100	Acquired	Steel industry refractory products	30	1982
Takasago Corp. USA	Teterboro, NJ	Takasago Perfumery Co., Ltd.	100	Acquired	Food flavoring compounds	35	1984
•Takeda Chemical Products U.S.A. Inc.	Wilmington, NC	Takeda Chemical Industries, Ltd.	100	New	Vitamin B_1	25*	1986*
Teenform Group	Miami, FL	Wacoal Corp.	100	Acquired	Women's intimate apparel	60	1983
Teenform Group	Luquio, PR	Wacoal Corp.	100	Acquired	Women's intimate apparel	250	1983
Templock/AFM Inc.	Carpinteria, CA	Nippon Automatic Fine Machinery Co., Ltd. Marubun Corp. Templock Corp.	39 10 51	New	Heat-shrinkable plastic material application machinery	n.a.	1981
Thin Film Technology Corp.	North Mankato, MN	Susumu Co., Ltd.	100	New	Thin-film resistive electronic components	50	1982
Togiak Fisheries, Inc.	Togiak, AK	Marubeni Corp.	Majority share	Acquired	Canned/frozen fish	140	1972
Tokai of America Inc.	Rancho Cucamonga, CA	Tokai Seiki Co., Ltd.	100	New	Disposable cigarette lighters	40	1982
Tomoegawa (U.S.A.) Inc.	Wheeling, IL	Tomoegawa Paper Co., Ltd.	100	New	Toner/developer/other consummable supplies for photocopying industry	50	1980
Totaku America Corp.	Compton, CA	Totaku Industries Inc.	100	New	Plastic/rubber flexible hose	50	1974

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
Toyojamco, Ltd.	York, PA	Japan Automatic Machine Co., Ltd.	50	New	Components for automatic crimping machinery	15	1983
		Oriental Terminal Products Co., Ltd.	50				
Tri-Con Industries, Ltd.	Cape Girardeau, MO	Tokyo Seat Co., Ltd.	100	New	Automotive seats	470	1983
Tri-Con Industries, Ltd.	Columbia, MO	Tokyo Seat Co., Ltd.	100	New	Automotive seats	250	1983
•Tri-Con Industries, Ltd.	Lincoln, NE	Tokyo Seat Co., Ltd.	100	New	Automotive seat frames	30*	1985*
Tube Turns Inc.	Louisville, KY	Sumitomo Metal Industries, Ltd.	49	Acquired	Welded steel fittings, forgings, engineered products	300	1983
		Sumitomo Corp.	49				
		Sumitomo Bank, Ltd.	2				
UGM, Inc.	Santa Clara, CA	Tokyo Tan-Ichi Co., Ltd.	100	New	Metal stampings for integrated circuit lead frames	9	1976
U.S. Fuji Electric Inc.	Piscataway, NJ	Fuji Electric Co., Ltd.	100	New	Photo-sensitive drums for copiers	30	1983
US JVC Corp.	Elmwood Park, NJ	Victor Co. of Japan, Ltd.	100	New	Color television sets	45	1982
USR Optinix Inc.	Hackettstown, NJ	Mitsubishi Chemical Industries, Ltd.	100	Acquired	Fluorescent material for cathode ray tube displays	50	1981
Union Inc.	Costa Mesa, CA	Union Trading Co., Inc.	100	New	Instant noodles	120	1976
•Universal Magnetics, Inc.	Chatsworth, CA	Minebea Co., Ltd.	100	Acquired	Direct-current motors for computer equipment	100	1984
Universal Seafoods Ltd.	Dutch Harbor, AK	Nippon Suisan Kaisha, Ltd.	47	New	Frozen fish	100	1975
Universal Seafoods Ltd.	Redmond, WA	Nippon Suisan Kaisha, Ltd.	47	New	Frozen fish	200	1975
•VAM-PTS Co.	Houston, TX	Sumitomo Metal Industries, Ltd. Sumitomo Corp.	49	Acquired	Steel threading for oil/gas drilling pipe	130	1984
		Vallourec S.A.	51				
Viam Manufacturing Inc.	Santa Fe Springs, CA	Japan Vilene Co., Ltd.	60	New	Automotive mats	50	1984
		Dainippon Ink & Chemicals Inc.	40				
Wards Cove Packing Co., Inc.	Alitak, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish	1,500	1973
Wards Cove Packing Co., Inc.	Ekuk, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish		1973
Wards Cove Packing Co., Inc.	Excursion Inlet, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish		1973
Wards Cove Packing Co., Inc.	Icy Cape, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish		1973
Wards Cove Packing Co., Inc.	Kenai, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish		1973
Wards Cove Packing Co., Inc.	Ketchikan, AK	Marubeni Corp.	Minority share	Acquired	Canned fish		1973
Wards Cove Packing Co., Inc.	Naknek, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish		1973
Wards Cove Packing Co., Inc.	Port Bailey, AK	Marubeni Corp.	Minority share	Acquired	Canned/frozen fish		1973
Warner-Ishi Corp.	Shelbyville, IL	Ishikawajima-Harima Heavy Industries Co., Ltd.	50	New	Automotive turbochargers	100*	1985*
		Borg-Warner Corp.	50				
Western Alaska Fisheries, Inc.	Kodiak, AK	Taiyo Fishery Co., Ltd.	100	New	Canned/frozen fish	35	1963

Company	Plant Location	Parent	Share	New or Acquired	Product Line	Employees	Year Plant Opened or Acquired
Whitney-Fidalgo Seafoods, Inc.	Anchorage, AK	Kyokuyo Co., Ltd.	98	Acquired	Canned/frozen fish	1,000	1973
Whitney-Fidalgo Seafoods, Inc.	Dutch Harbor, AK	Kyokuyo Co., Ltd.	98	Acquired	Frozen fish		1973
Whitney-Fidalgo Seafoods, Inc.	Kodiak, AK	Kyokuyo Co., Ltd.	98	Acquired	Canned fish		1973
Whitney-Fidalgo Seafoods, Inc.	Naknek, AK	Kyokuyo Co., Ltd.	98	Acquired	Canned fish		1973
Whitney-Fidalgo Seafoods, Inc.	Uyak, AK	Kyokuyo Co., Ltd.	98	Acquired	Canned fish		1973
Whitney-Fidalgo Seafoods, Inc.	Anacortes, WA	Kyokuyo Co., Ltd.	98	Acquired	Canned fish		1973
•Woodward Iodine Corp.	Woodward, OK	Ise Chemical Industries Co., Ltd. Asahi Glass Co., Ltd.	80 20	Acquired	Iodine	18	1984
•Wynn-Kiki Inc.	Fort Worth, TX	Diesel Kiki Co., Ltd. Wynn Industries, Inc.	50 50	Acquired	Compressors/evaporators for automotive air conditioners	90	1984

n.a. not available
* Projected
** The Howmet Aluminum name may be used until August 29, 1985.
• Previously unlisted plants that went into operation during 1984 or were under construction on December 31, 1984, as well as acquisitions that were finalized in 1984.

Appendix 2: U.S. Manufacturing Affiliates of Japanese Companies by State

Alabama
•CoilPlus, Inc.
•Metco America Inc.
•TNS Mills, Inc.

Alaska
Bering Sea Fisheries, Inc.
Dutch Harbor Seafoods Co., Inc.
North Pacific Processors Inc. (3)
Peter Pan Seafoods Inc. (3)
Togiak Fisheries, Inc.
Universal Seafoods Ltd.
Wards Cove Packing Co., Inc. (8)
Western Alaska Fisheries, Inc.
Whitney-Fidalgo Seafoods, Inc. (5)

Arizona
Alumax Inc., Alumax Fabricated Products, Inc.
Chickasha Cotton Oil Co.
NKK Switches of America, Inc.

Arkansas
Alumax Inc., Howmet Aluminum
Alumax Inc., Kawneer Co., Inc.
Nutrius Inc.
•Omega Tube and Conduit Corp.

California
Alloy Tool Steel Inc.
Alumax Inc., Alumax Fabricated Products, Inc. (2)
Alumax Inc., Howmet Aluminum (3)
American Foods Corp. (4)
Amsnack, Inc.
CTY Corp.
•California Steel Industries Inc.
•Chateau St. Jean
Concise Casting Corp.
Cryodynamics Co.-Ebara Group
•Curtis-Maruyasu America, Inc.
•Dainippon Screen Engineering of America Inc.
Daiwa Golf Co.
Forman Industries Inc.
•Hirose Electric (U.S.A.), Inc.
Hitachi Consumer Products of America Inc.
Hi-Tek Corp.
House Foods and Yamauchi Inc.
IDEC Systems & Controls Corp.
IKS American Corp.
International Leadframe Corp.
•International Light Metals Corp.
Kaga USA Inc.
Kato Spring Inc.
Kikusui International Corp.
Lafayette Metal Service Corp.
•Maruhachi Ceramics of America
Master Fence Fittings Inc.
Matheson Gas Products Inc. (2)
Matsushita Electronic Components Co.
Megatool Inc.
Memorex DIC Corp.
Mitutoyo Corp.
NEC America, Inc.
NEC Electronics U.S.A. Inc.
•New United Motor Manufacturing Inc.
Nidek Inc.
Niitakaya USA Inc.
•Nitto Denko America, Inc.
•Nutrius Inc. (3)
•Oki Semiconductor Inc.
•Orange Bakery Inc. (2)
•Pasco Corp. of America
Pioneer Video, Inc.
•Rion Acoustic Instruments, Inc.
S & E International Corp.
SMK Manufacturing Inc.
Sanoh Manufacturing Corp.
Shinko Electric America Inc.
Sierracin Glass Transparencies Inc.
•Sumitomo Metal Mining California Corp.
•Systems Magnetic Co.
Templock/AFM Inc.
Tokai of America Inc.
Totaku America Corp.
UGM, Inc.
Union Inc.
•Universal Magnetics, Inc.
Viam Manufacturing Inc.

Colorado
Alumax Inc., Kawneer Co., Inc.
Data Ray Corp.

Connecticut
•Nidec Torin Corp.

Delaware
No listings

Florida
•ASTRONET Corp.
Alumax Inc., Howmet Aluminum
Fujitsu America, Inc.
MCI Inc.
Teenform Group

Georgia
•Alumax Inc., Alumax Fabricated Products Inc.
Alumax Inc., Howmet Aluminum (5)
Amitech Inc.
High Voltage Breakers, Inc.

•Hitachi Chemical Co. America, Ltd.
Kato Spring of Georgia Inc.
•Kubota Tractor Corp.
Matheson Gas Products Inc.
•NEC Home Electronics (U.S.A.) Inc.
Okabashi (U.S.) Corp.
Oki America Inc.
•Scripto Tokai Inc.

Hawaii
Bunmeido of Hawaii Ltd.
Daiichiya Love's Bakery Inc.
Honma Golf, Inc.
Rakuyo Ken U.S.A. Inc.

Idaho
No additional listings

Illinois
Alumax Inc., Howmet Aluminum
•LyphoMed Inc.
Matheson Gas Products Inc.
•Matsushita Communication Co.
•National Steel Corp.
North American Lighting, Inc.
Tomoegawa (U.S.A.) Inc.
Warner-Ishi Corp.

Indiana
•Alumax Inc., Alumax Fabricated Products Inc.
Alumax Inc., Howmet Aluminum
Digital Audio Disc Corp.
•National Steel Corp.

Iowa
•Heartland Lysine, Inc.
Nutrius Inc.

Kansas
Alumax Inc., Howmet Aluminum

Kentucky
ATR Wire and Cable Co.
Alumax Inc., Howmet Aluminum
Nutrius Inc.
Tube Turns Inc.

Louisiana
Matheson Gas Products Inc.

Maine
No additional listings

Maryland
No additional listings

Massachusetts
•Cape Cod Potato Chips
•Kameyama U.S.A. Inc.
Matheson Gas Products Inc.
NEC Information Systems, Inc.

Michigan
Alumax Inc., Howmet Aluminum (2)
Cast Forge Co.
FEC Inc.
•Hemlock Semiconductor Corp.
•Musashi USA Inc.
•National Steel Corp.
Nikko Wolverine Inc.
Nippondenso Sales, Inc.

Minnesota
Thin Film Technology Corp.

Mississippi
Southern Metal Service, Inc.

Missouri
Alumax Inc., Howmet Aluminum (2)
Bio Kyowa Inc.
Fotomat Corp.
Kel-Am, Inc.
Tri-Con Industries, Ltd. (2)

Montana
No listings

Nebraska
Diamond Plastics Corp.
•Tri-Con Industries, Ltd.

Nevada
No listings

New Hampshire
Coca-Cola Bottling Co.

New Jersey
•Iwatsu America Inc.
MCI Optinix Inc.
Matheson Gas Products Inc.
•NSG America Inc.
Orient Shimazaki Chemical Corp.
SDS Biotech Corp.
Takasago Corp. USA
U.S. Fuji Electric Inc.
US JVC Corp.
USR Optinix Inc.

New Mexico
No listings

New York
Economic Salon, Ltd.
IMC Magnetics Corp.
Oak-Mitsui, Inc.
Shindo International, Inc.

North Carolina
Alumax Inc., Alumax Extrusions, Inc.
Alumax Inc., Howmet Aluminum
Fuji Cone Inc.
Fuji Foods Inc.
Honda Power Equipment Manufacturing Inc.
Kibun Corp. of North Carolina
●Mitsubishi Semiconductor America Inc.
●Sumitomo Electric Research Triangle, Inc.
●Takeda Chemical Products U.S.A. Inc.

North Dakota
No listings

Ohio
ALCOA-NEC Communications Corp.
Alumax Inc., Howmet Aluminum
Alumax Inc., Kawneer Co., Inc.
●Ando Screen Inc.
●Bellemar Parts Industries Inc. (2)
●Eaton Auto Products Manufacturing Inc.
Fotomat Corp.
Fujitec Industries, Inc.
●Honda of America Mfg., Inc.
●KTH Parts Industries Inc.
LeBlond Makino Machine Tool Co.
Matheson Gas Products Inc.
Stanley Electric U.S. Co., Inc.

Oklahoma
Chickasha Cotton Oil Co.
North American Brine Resources
●Woodward Iodine Corp.

Oregon
Enway Inc.
●NEC America, Inc.

Pennsylvania
Alumax Inc., Howmet Aluminum (6)
TYK Swank Refractories Co.
Toyojamco Ltd.

Rhode Island
Machine Specialties Co.

South Carolina
TNS Mills, Inc.

South Dakota
No additional listings

Tennessee
Bridgestone Tire Manufacturing (U.S.A.), Inc.
Calsonic Manufacturing Corp.
Clarion Corp. of America
●Kantus Corp.
●Nisco Steel Services Inc.
Pearl International Corp.

Texas
Alloy Tool Steel of Texas Inc.
●Alumax Inc., Alumax Mill Products Inc.
Alumax Inc., Howmet Aluminum (10)
Alumax Inc., Kawneer Co., Inc.
Chickasha Cotton Oil Co. (2)
Diamond Plastics Corp.
First Metals, Inc.
Fuji Koki America Inc.
Fujitsu America, Inc.
Halco Fence & Wire Co.
Kaneka Texas Corp.
Matheson Gas Products Inc.
●Nisshin Gulf Coast Inc.
Pyr Coat Inc.
SDS Biotech Corp.
Sony Magnetic Products Inc. of America
●VAM-PTS Co.
●Wynn-Kiki Inc.

Utah
No listings

Vermont
No additional listings

Virginia
Amano-International Enzyme Co., Inc.

Washington
Alpha Biochemical Corp.
Alumax Inc., Howmet Aluminum
International Titanium Inc.
Japan Aircraft Maintenance (America), Inc.
Kibun Corp. of Washington
●Kyocera Northwest Inc.
Nichimo Northwest, Inc.
Nintendo of America, Inc.
Olympic Wood Products Inc.
Pacific Propeller, Inc.
Universal Seafoods Ltd.
Whitney-Fidalgo Seafoods, Inc.

West Virginia
No listings

Wisconsin
No additional listings

Wyoming
No listings

Puerto Rico
Caribe Isoprene Corp.
Matsushita Electric of Puerto Rico, Inc.
Mitsubishi Foods Inc.
Neptune Packing Corp.
Teenform Group

•Previously unlisted plants that went into operation during 1984 or were under construction on December 31, 1984, as well as acquisitions that were finalized in 1984.

Note: A number in parentheses indicates that the relevant company has plants in more than one location in the state.

Appendix 3: U.S. Manufacturing Affiliates of Japanese Companies by Product Line

Food Products

2013	Shumai	Rakuyo Ken U.S.A. Inc.
2034	Instant noodles	Union Inc.
2035	Cooking wines	American Foods Corp. (2)
	Sauces	American Foods Corp.
	Pickles	Niitakaya USA Inc.
2037	Frozen potato products	Enway Inc.
2051	Bakery products	Bunmeido of Hawaii Ltd.
	Bakery products	Daiichiya Love's Bakery Inc.
	Bakery products	●Orange Bakery Inc.(2)
	Bakery products	●Pasco Corp. of America
2052	Rice crackers	Amsnack, Inc.
2074	Cottonseed oil	Chickasha Cotton Oil Co. (4)
2077	Binder for fish feed	Alpha Biochemical Corp.
2084	Wine	●Chateau St. Jean
2086	Soft drinks	Coca-Cola Bottling Co.
2091	Canned fish	Mitsubishi Foods Inc.
	Canned fish	Neptune Packing Corp.
	Canned fish	North Pacific Processors Inc. (3)
	Canned fish	Peter Pan Seafoods Inc. (2)
	Canned fish	Togiak Fisheries, Inc.
	Canned fish	Wards Cove Packing Co., Inc. (8)
	Canned fish	Western Alaska Fisheries, Inc.
	Canned fish	Whitney-Fidalgo Seafoods, Inc. (5)
2092	Frozen fish	Bering Sea Fisheries, Inc.
	Frozen fish	Dutch Harbor Seafoods Co., Inc.
	Frozen fish	North Pacific Processors Inc. (3)
	Frozen fish	Peter Pan Seafoods Inc. (2)
	Frozen fish	Togiak Fisheries, Inc.
	Frozen fish	Universal Seafoods Ltd. (2)
	Frozen fish	Wards Cove Packing Co., Inc. (7)
	Frozen fish	Western Alaska Fisheries, Inc.
	Frozen fish	Whitney-Fidalgo Seafoods, Inc. (2)
	Frozen seafood	Kibun Corp. of North Carolina
	Frozen seafood	Kibun Corp. of Washington
2099	Potato chips	●Cape Cod Potato Chips
	Beef/chicken extracts for soup stocks	Fuji Foods Inc.
	Tofu/related soybean products	House Foods and Yamauchi Inc.
	Seasoning mixes	S & B International Corp.
	Vinegar	American Foods Corp. (4)

Tobacco Manufactures

No listings

Textile Mill Products

2211	Cotton-blend sheeting	TNS Mills, Inc.
2271	Automotive mats	Viam Manufacturing Inc.
2281	Cotton yarn	●TNS Mills, Inc.
	Polyester-cotton blend yarn	TNS Mills, Inc.

Apparel and Made-up Textile Products

234	Women's intimate apparel	Teenform Group (2)
2399	Gill nets	Nichimo Northwest, Inc.

Lumber and Wood Products

2421	Lumber	Olympic Wood Products Inc.

Furniture and Fixtures

2517	Speaker boxes	Matsushita Electric of Puerto Rico, Inc.
2599	Kiosks	Fotomat Corp.

Paper and Paper Products

No additional listings

Printing and Publishing

2721	Periodicals publishing	Economic Salon, Ltd.
2752	Color separation, offset printing	Shindo International, Inc.

Chemicals and Related Products

2813	Specialty gases	Matheson Gas Products Inc. (9)
2819	Fluorescent material for cathode ray tube displays	USR Optinix Inc.
	Iodine	North American Brine Resources
	Iodine	●Woodward Iodine Corp.
2821	Methyl methacrylate-butadiene-styrene resins	Kaneka Texas Corp.
2822	Isoprene monomer, dicyclopentadiene, piperylene	Caribe Isoprene Corp.
2833	Vitamin B1	●Takeda Chemical Products U.S.A. Inc.
2834	Injectable drugs	●LyphoMed Inc.
	Animal health products	SDS Biotech Corp.
2865	Nigrosine (black ink)	Orient Shimazaki Chemical Corp.
2869	Enzymes	Amano-International Enzyme Co., Inc.
	Food flavoring compounds	Takasago Corp. USA
	Feed additives	●Nutrius Inc. (6)
	Lysine (feedstuff amino acid additive)	Bio Kyowa Inc.
	Lysine (feedstuff amino acid additive)	●Heartland Lysine, Inc.
	Impact modifiers for plastics industry	●Metco America Inc.
2879	Agricultural chemicals	SDS Biotech Corp.
2899	Fireproof coatings, fireproof spray insulation/adhesives, asbestos encapsulation/removal products	Pyr Coat Inc.

Petroleum Refining

No additional listings

Rubber and Miscellaneous Plastic Products

3011	Radial truck/bus tires	Bridgestone Tire Manufacturing (U.S.A.), Inc.
3041	Plastic/rubber flexible hose	Totaku America Corp.

3079	Polyvinyl chloride pipes	Diamond Plastics Corp. (2)
	Plastic parts for electronics industry/medical uses	Amitech Inc.
	Custom fluoropolymer linings for corrosion resistance	•Nisshin Gulf Coast Inc.
Leather and Leather Products		
314	Men's/women's sandals/ other footwear	Okabashi (U.S.) Corp.
Stone, Clay, Glass and Concrete Products		
3231	Glass transparencies for aircraft	Sierracin Glass Transparencies Inc.
3259	Roofing tiles	•Maruhachi Ceramics of America
3297	Steel industry refractory products	TYK Swank Refractories Co.
Primary Metals		
3312	Hot-rolled, cold-rolled/ galvanized steel sheets/ coils, hot-rolled steel plates	•California Steel Industries Inc.
	Steel slabs/hot-rolled, cold-rolled/coated steel sheets	•National Steel Corp.
	Cold-rolled, coated/tin-plate sheets	•National Steel Corp.
	Steel slabs/hot-rolled/ cold-rolled steel sheets	•National Steel Corp.
3317	Welded steel tubing	•Omega Tube and Conduit Corp.
3339	Titanium sponge	International Titanium Inc.
	Polycrystalline silicon	•Hemlock Semiconductor Corp.
3341	Secondary aluminum slab/billet	Alumax Inc., Howmet Aluminum
	Recycled aluminum scrap	Alumax Inc., Howmet Aluminum (3)
3353	Aluminum sheet	•Alumax Inc. Alumax Mill Products Inc.
	Aluminum sheet/coil	Alumax Inc., Howmet Aluminum (2)
3354	Aluminum extruded shapes	Alumax Inc., Alumax Extrusions, Inc.
	Aluminum extruded shapes	Alumax Inc., Howmet Aluminum
	Aluminum bars/extrusions	•International Light Metals Corp.
3356	Titanium bars/extrusions	•International Light Metals Corp.
	Titanium/zirconium tubes/pipe	Nikko Wolverine Inc.
3361	Aluminum castings	Concise Casting Corp.
Fabricated Metal Products		
344	Steel processing	Alloy Tool Steel Inc.
	Steel processing	Alloy Tool Steel of Texas Inc.
	Steel processing	•CoilPlus, Inc.
	Steel processing	First Metals, Inc.
	Steel processing	Lafayette Metal Service Corp.
	Steel processing	•Nisco Steel Services Inc.
	Steel processing	Southern Metal Service, Inc.
	Aluminum/copper/steel processing	Alumax Inc., Howmet Aluminum (6)
3442	Aluminum bath enclosures	Alumax Inc., Howmet Aluminum (3)
	Aluminum garage doors	Alumax Inc., Howmet Aluminum
	Aluminum products for commercial remodeling	Alumax Inc., Howmet Aluminum
3444	Aluminum products for housing aftermarket	Alumax Inc., Alumax Fabricated Products, Inc. (3)
	Aluminum products for housing aftermarket	Alumax Inc., Howmet Aluminum (7)
	Aluminum products for mobile homes/recreational vehicles	Alumax Inc., Howmet Aluminum (7)
	Aluminum products for housing aftermarket/mobile homes	•Alumax Inc., Alumax Fabricated Products, Inc. (2)
	Aluminum rain-carrying components/other building products	Alumax Inc., Howmet Aluminum (5)
	Aluminum spectator seating, scaffolding, ceiling grid systems, custom fabricated work	Alumax Inc., Howmet Aluminum
	Sheet-metal ducts	Forman Industries, Inc.
3446	Architectural aluminum products	Alumax Inc., Kawneer Co., Inc. (3)
3462	Steel forgings	Tube Turns Inc.
3463	Aluminum wheels/other die-cast aluminum automotive products	Cast Forge Co.
	Aluminum/titanium forgings	•International Light Metals Corp.
3465	Automotive body stampings	•New United Motor Manufacturing Inc.
	Automotive seat frames	•Tri-Con Industries, Ltd.
3469	Lead frames for integrated circuits	International Leadframe Corp.
	Lead frames for integrated circuits	Shinko Electric America Inc.
	Lead frames for integrated circuits	•Sumitomo Metal Mining California Corp.
	Lead frames/other metal parts for integrated circuits	Kaga USA Inc.
	Metal stampings for integrated circuit lead frames	UGM, Inc.
3494	Welded steel fittings, engineered products	Tube Turns Inc.
	Expansion valves for automotive air conditioning systems	Fuji Koki America Inc.
3495	Precision springs	Kato Spring Inc.
	Precision springs	Kato Spring of Georgia Inc.
3496	Chain link	Halco Fence & Wire Co.
	Fittings for metal fencing	Master Fence Fittings Inc.
	Steel cord/bead wire for tires	ATR Wire and Cable Co.
3497	Electro-deposited copper foil	Oak-Mitsui, Inc.
3498	Steel threading for oil/gas drilling pipe	•VAM-PTS Co.
Nonelectric Machinery		
3523	Farm tractors	•Kubota Tractor Corp.
3524	Lawnmowers	Honda Power Equipment Manufacturing Inc.
3534	Elevators, escalators	Fujitec Industries, Inc.
3541	Numerically controlled lathes, machining centers	LeBlond Makino Machine Tool Co.
	Numerical controls	LeBlond Makino Machine Tool Co.
3546	Carbide drills	Megatool Inc.
3555	Electronic page makeup systems/ color scanners for graphic arts industry	•Dainippon Screen Engineering of America Inc.

3559	Components for automatic crimping machinery	Toyojamco Ltd.
3561	Pumps for low-temperature liquids	Cryodynamics Co.-Ebara Group
3562	Ball bearings	IKS American Corp.
3564	Fans/blowers for communications/ computer equipment	IMC Magnetics Corp.
	Small horsepower fans for computer motors	●Nidec Torin Corp.
3568	Pulleys	Machine Specialties Co.
3569	Specialty gas handling equipment	Matheson Gas Products Inc. (9)
	Screening equipment for liquid-solid separation	●Ando Screen Inc.
	Electronic fastening systems	FEC Inc.
	Heat-shrinkable plastic material application machinery	Templock/AFM Inc.
3573	Computers/peripheral equipment	NEC Information Systems, Inc.
	Computer keyboards	Hi-Tek Corp.
	CRT display modules	Data Ray Corp.
3585	Compressors/evaporators for automotive air conditioners	●Wynn-Kiki Inc.
3599	Membrane modules for recovery of electrodeposited paint	●Nitto Denko America, Inc.

Electric Machinery and Electronics

3613	Circuit breakers for power plants/transmission lines	High Voltage Breakers, Inc.
3621	Electric motors	IMC Magnetics Corp.
	Voice-coil motors for computer disk drives	●Systems Magnetic Co.
	Direct-current motors for computer equipment	●Universal Magnetics, Inc.
	Motors for phonographs/audio equipment	Matsushita Electric of Puerto Rico, Inc.
3632	Refrigerator parts	Sanoh Manufacturing Corp.
3643	Electric/electronic switches	NKK Switches of America, Inc.
3647	Automotive lighting equipment	North American Lighting, Inc.
	Automotive/motorcycle lighting equipment	Stanley Electric U.S. Co., Inc.
3651	Color television sets	Hitachi Consumer Products of America Inc.
	Color television sets	●NEC Home Electronics (U.S.A.) Inc.
	Color television sets	US JVC Corp.
	Automotive radio combinations	Clarion Corp. of America
	Recording studio equipment	MCI Inc.
	Stereo speakers, record changers	Matsushita Electric of Puerto Rico, Inc.
	Paper cones for stereo speakers	Fuji Cone Inc.
3652	Digital audio discs	Digital Audio Disc Corp.
	Video discs	Pioneer Video, Inc.
3661	Electronic private branch exchanges	Oki America Inc.
	Key telephone systems	●Iwatsu America Inc.
3662	Cellular mobile communications equipment	●ASTRONET Corp.
	Cellular mobile communications equipment	●Matsushita Communication Co.
	Cellular mobile communications equipment	Oki America Inc.
	Cellular mobile communications equipment, mobile paging devices	NEC America, Inc.
	Cellular mobile/fiber-optic communications equipment, multiplexers, microwave radios	Fujitsu America, Inc.
	Fiber-optic communications equipment	●NEC America, Inc.
	Satellite television receiving systems	ALCOA-NEC Communications Corp.
	Video game machines	Nintendo of America, Inc.
3674	Integrated circuits	Matsushita Electronic Components Co.
	Integrated circuits	●Mitsubishi Semiconductor America Inc.
	Integrated circuits	NEC Electronics U.S.A. Inc.
	Integrated circuits	●Oki Semiconductor Inc.
3675	Axial capacitors	CTY Corp.
	Ceramic capacitors	●Kyocera Northwest Inc.
3676	Thin-film resistive electronic components	Thin Film Technology Corp.
3678	Connectors	●Hirose Electric (U.S.A.), Inc.
	Connectors	Kel-Am, Inc.
	Connectors	SMK Manufacturing Inc.
3679	Audio cassette tapes	Sony Magnetic Products Inc. of America
	Multiwire boards	●Hitachi Chemical Co. America, Ltd.
	Cable assemblies, power supply units/related components for computers/peripheral equipment	Fujitsu America, Inc.
	Relays, sockets, switches/other electrical industrial components	IDEC Systems & Controls Corp.
3693	X-ray intensifying screens for medical use	MCI Optinix Inc.

Transportation Equipment

3711	Cars	●New United Motor Manufacturing Inc.
3714	Automotive air conditioners, exhaust assemblies	Calsonic Manufacturing Corp.
	Automotive exhaust systems, catalytic converters, brake lines, door sashes	●Bellemar Parts Industries Inc.
	Automotive fuel line/ hydraulic brake assemblies	●Curtis-Maruyasu America, Inc.
	Automotive turbochargers	Warner-Ishi Corp.
	Automotive windshield washers/heaters	Nippondenso Sales, Inc.
	Automotive seats	Tri-Con Industries, Ltd. (2)
	Automotive seats, wheels	Bellemar Parts Industries Inc.
	Automotive steering wheels	●Eaton Auto Products Manufacturing Inc.
	Automotive arm bushing/joint assemblies	●Musashi USA Inc.

	Automotive plastic instrument panels, radiator grilles, console boxes/bumpers	•Kantus Corp.
	Automotive stamped/welded internal structural components	•KTH Parts Industries Inc.
3728	Aircraft propellers	Pacific Propeller, Inc.
	Aircraft interior equipment	Japan Aircraft Maintenance (America), Inc.
3751	Motorcycle engines	•Honda of America Mfg., Inc.
	Motorcycle seats	Bellemar Parts Industries Inc.
Precision, Medical and Photographic Equipment		
3825	Oscilloscopes	Kikusui International Corp.
3829	Calipers, micrometers	Mitutoyo Corp.
3832	Fiber-optic lens	•NSG America Inc.
	Fiber-optic cables	•Sumitomo Electric Research Triangle, Inc.
3841	Auto-refractometers, photocoagulators/other ophthalmologic instruments	Nidek Inc.
3842	Custom-designed hearing aids	•Rion Acoustic Instruments, Inc.
3861	Photographic chemicals	Fotomat Corp.
	Photo-sensitive drums for copiers	U.S. Fuji Electric Inc.
	Toner/developer for copiers, duplicators/printers	Memorex DIC Corp.
	Toner/developer/other consummable supplies for photocopying industry	Tomoegawa (U.S.A) Inc.
Miscellaneous Manufactures		
3931	Musical drums	Pearl International Corp.
3949	Golf clubs	Daiwa Golf Co.
	Golf clubs	Honma Golf, Inc.
395	Writing instruments	•Scripto Tokai Inc.
3999	Disposable cigarette lighters	Tokai of America Inc.
	Candles	•Kameyama U.S.A. Inc.

•Previously unlisted plants that went into operation during 1984 or were under construction on December 31, 1984, as well as acquisitions that were finalized in 1984.

Note: Product lines are grouped in terms of the Standard Industrial Classification. A number in parentheses indicates that the relevant company produces its product line in more than one location.

Appendix 4: Changes in Previously Listed U.S. Manufacturing Affiliates of Japanese Companies

1. Companies Closed or Sold

Company	Plant Location	Parent	Product Line
Cathra International Corp.	St. Paul, MN	Gunze Sangyo, Inc. Tokyo Lease Co., Ltd.	Medical diagnostic equipment
Ceradyne Inc.	Santa Ana, CA	Kyocera Corp.	Heat-resistant ceramics
Daitom Inc.	Kansas City, KS	Daiichi Seiyaku Co., Ltd. Thompson-Hayward Chemical Co.	Vitamin B complex
Denka Chemical Corp.	Houston, TX	Denki Kagaku Kogyo K.K.	Chloroprene, maleic anhydride
Feltloc, Inc.	East Greenwich, RI	Dynic Corp.	Nonwoven cotton fabrics
Fujitsu America, Inc.	Melbourne, FL	Fujitsu, Ltd.	Word processing terminals
Harbor Seafood Co., Inc.	Wrangell, AK	Alaska Pulp Co., Ltd.	Canned/frozen fish
Hitachi Magna-Lock Corp.	Big Rapids, MI	Hitachi Metals, Ltd.	Magnetic/vacuum chucks
Infinity Systems, Inc.	Canoga Park, CA	Kyocera Corp.	Stereo speakers
KLH Research & Development Corp.	Canoga Park, CA	Kyocera Corp.	Stereo speakers
Kodiak King Crab, Inc.	Juneau, AK	Marubeni Corp. Ocean Beauty Seafoods Inc.	Frozen fish
Kodiak King Crab, Inc.	Kodiak, AK	Marubeni Corp. Ocean Beauty Seafoods Inc.	Canned/frozen fish
Kodiak Lumber Mills, Inc.	Anchorage, AK	Mitsui & Co., Ltd.	Logs, wood chips
Marcrest Pacific Co., Inc.	Carson, CA	Marubeni Corp. Crest Steel Corp.	Welded steel beams
Meiwa U.S.A., Inc.	Charlotte, NC	Meiwa Gravure Chemical Co., Ltd. Kanematsu-Gosho, Ltd.	Polyvinyl chloride sheeting
Morpac, Inc.	Cordova, AK	Nippon Suisan Kaisha, Ltd. Mitsui & Co., Ltd.	Canned fish
Mount Pleasant Chemical Co.	Mt. Pleasant, TN	Sumitomo Chemical Co., Ltd. Sumitomo Corp. Stauffer Chemical Co.	Insecticides
Myojo Foods of America Inc.	Sidney, OH	Myojo Foods Co., Ltd.	Instant noodles
National Plywood, Inc.	Long Beach, CA	Mitsui & Co., Ltd.	Plywood
Oki Electronics of America, Inc.	Oakland Park, FL	Oki Electric Industry Co., Ltd.	Electronic private branch exchanges (output transferred to Norcross, GA)
Optical Information Systems Inc.	Elmsford, NY	Mitsubishi Chemical Industries, Ltd.	Semiconductor laser devices/ subsystems
Rosewood Knitting Mills, Inc.	Martinez, GA	Toyobo Co., Ltd.	Synthetic-fiber grey goods knitting
SMK Donnette Inc.	Chatsworth, CA	Showa Musen Kogyo Co., Ltd.	Connectors
Sekisui Products, Inc.	Linden, NJ	Sekisui Chemical Co., Ltd.	Polyethylene foam pipe insulation
Supergreen Inc.	Hazleton, PA	Kaiyo Bokujo Co., Ltd. Sekisui Plastics Co., Ltd. Itoman & Co., Ltd.	Packaged hydroponic radish sprouts
Topri Inc.	Peachtree City, GA	Tokyo Print Industry Co., Ltd.	Printed circuit boards
VHD Disc Manufacturing Co.	Irvine, CA	Victor Co. of Japan, Ltd. Matsushita Electric Industrial Co., Ltd. General Electric Co. Thorn EMI Ltd.	Video discs
West Virginia Flat Glass Inc.	Clarksburg, WV	Asahi Glass Co., Ltd.	Flat glass

2. Merged Companies

Old Company	New Company
Emcon Inc. Viclan Inc.	Kyocera International, Inc.
Erie Technological Products Inc. JFD Electronic Components Inc. Murata Corp. of America	Murata Erie North America, Inc.

3. Permanently Closed or Sold Plants

Company	Plant Location	Parent	Product Line
Alaska Lumber and Pulp Co. Inc.	Wrangell, AK	Alaska Pulp Co., Ltd.	Lumber
Alumax Inc., Alumax Fabricated Products, Inc.	Twin Falls, ID	Mitsui & Co., Ltd. Nippon Steel Corp. AMAX Inc.	Aluminum irrigation tubing
Alumax Inc. Apex International Alloys, Inc.	Checotah, OK	Mitsui & Co., Ltd. Nippon Steel Corp. AMAX Inc.	Secondary aluminum/zinc alloys
Alumax Inc., Hillyard Aluminum Recovery Corp.	Fontana, CA	Mitsui & Co., Ltd. Nippon Steel Corp. AMAX Inc.	Dross recovery
Alumax Inc., Kawneer Co., Inc., South Bend Screw Products	South Bend, IN	Mitsui & Co., Ltd. Nippon Steel Corp. AMAX Inc.	Aluminum fasteners
Erie Technological Products Inc.	Erie, PA	Murata Mfg. Co., Ltd.	Ceramic capacitors
Hitachi Consumer Products of America Inc.	Compton, CA	Hitachi, Ltd.	Color televisions (output transferred to Anaheim, CA)
Murata Corp. of America	Douglasville, GA	Murata Mfg. Co., Ltd.	Ceramic capacitors
NGK Spark Plug Mfg. (U.S.A.), Inc.	Van Nuys, CA	NGK Spark Plug Co., Ltd.	Spark plugs
Polychrome Corp.	Cincinnati, OH	Dainippon Ink & Chemicals Inc.	Lithographic ink
Whitney-Fidalgo Seafoods, Inc.	Petersburg, AK	Kyokuyo Co., Ltd.	Canned fish
Whitney-Fidalgo Seafoods, Inc.	Port Graham, AK	Kyokuyo Co., Ltd.	Canned fish
Whitney-Fidalgo Seafoods, Inc.	Seattle, WA	Kyokuyo Co., Ltd.	Frozen fish

4. Plant Location Changes

Company	Previous Plant Location	New Plant Location	Product Line
ARi Industries Inc.	Franklin Park, IL	Addison, IL	Temperature sensors/electric heating elements
Alumax Inc., Kawneer Co., Inc.	Rosemont, IL	Itasca, IL	Architectural aluminum products
IMC Magnetics Corp.	Maywood, CA	Cerritos, CA	Electric motors
Nippondenso of Los Angeles, Inc.	Carson, CA	Long Beach, CA	Automotive air conditioning systems

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JAPAN · ECONOMIC · INSTITUTE

JEI REPORT

NO. 7B
February 22, 1985

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JEI Personnel Changes

The Board of Trustees of the Japan Economic Institute is pleased to announce the appointment of William J. Barnds as the organization's President.

Mr. Barnds has worked for many years on Japanese and Asian affairs as well as on U.S. relations with Asia, first as a Senior Research Fellow at the Council on Foreign Relations in New York and more recently with the Senate Foreign Relations Committee and the House Foreign Affairs Committee. Immediately prior to assuming the presidency of JEI, Mr. Barnds was the Staff Director of the House Foreign Affairs' Subcommittee on Asian and Pacific Affairs. This subcommittee, which is responsible for the area from the Indian subcontinent through Northeast Asia, held extensive hearings on U.S.-Japan relations during Mr. Barnds' tenure.

Mr. Barnds received an undergraduate degree in business administration (finance) and a M.A. in economics from the University of Michigan. He also has a law degree from Georgetown University. Mr. Barnds is the author of several

The first session of what the Reagan administration bills as bilateral market-oriented sector-selective talks was devoted to telecommunications trade. The American participants were unimpressed. Commerce Under Secretary for International Trade Lionel Olmer and Deputy United States Trade Representative Michael B. Smith met with Deputy Foreign Minister Reishi Teshima and Vice Minister of Posts and Telecommunications (MPT) Moriya Koyama last week to exchange viewpoints on MPT's draft ordinances that will guide the deregulated telecommunications market. Of greatest concern were the proposals instituting a dual equipment certification system whereby Nippon Telegraph and Telephone Public Corp. (NTT) would have self-approval power over the goods it purchased, but all other companies seeking to sell telecommunications products in Japan would have to win approval from a separate institution. American negotiators feel not only that this system would give the privatized NTT a significant edge over the competition but that it erects a nontariff barrier around a market where U.S. companies are highly competitive -- a situation diametrically opposed to the access Japanese companies have in the U.S. market.

Additionally, MPT's failure to include provisions for type certification of equipment is a sensitive issue, since U.S. negotiators consider this omission a backward step. A MITI proposal to require up to four different types of approval seals has Americans on edge. It is possible that a single piece of equipment would have to obtain five seals in order to be marketed in Japan: one from NTT or MPT's appointed certification institute, another from NTT if the equipment hooks into its network, and one each from MITI for industrial quality, adherence to the Japan Industrial Standards Law and electrical safety. U.S. officials consider this far more complex than the current requirement for one approval seal from NTT, and are concerned that it enlarges opportunities for discrimination against foreign companies.

U.S. government and industry officials are also irked by Japan's refusal to distribute copies of the draft ordinances. While this is standard procedure for the Japanese government, U.S. industry representatives have insisted on seeing the actual draft before rendering their verdict. In an extraordinary step to reassure foreign parties, MPT Minister Megumu Sato agreed to release a summary of the draft ordinances by March 7 and to hold subsequent consultations with U.S. officials. Even this unusual move may not quell the brewing tempest, however.

If the Japanese draft proves to be unpalatable to the United States -- a strong possibility from preliminary indications -- very little time remains in which to hammer out a compromise among the Japanese ministries and then between the two countries. Many U.S. government and industry officials attach great symbolic importance to this issue. Both sides are working to bridge their differences before Mr. Brock's described perception gap widens. An MPT vice minister came to Washington early this week to lay the groundwork for a subcabinet-level meeting scheduled for February 25. It is unclear, however, whether enough time remains to completely defuse the issue.

Jon Choy

Awash in Red Ink: The 1984 U.S. Trade Account

The best thing that can be said about this country's mind-boggling 1984 merchandise trade deficit is that it was not quite as huge as analysts were predicting just a few months ago. Instead of ballooning from $57.5 billion in 1983 to $115 billion or more, the flood of red ink stopped at the $107.8 billion mark. This minor victory was entirely the result of fourth-quarter developments. Normally the biggest import period of the year, the October-December quarter turned out to be 1984's smallest despite the return of faster-than-anticipated U.S. growth and the dollar's continued gains against major foreign currencies. Exports also proved to be more resilient to the dampening effects of the high-flying dollar than expected. Still, trade policymakers were hard pressed to find any grounds for optimism about the near-term U.S. trade performance in the year-end numbers. Imports, which had expanded by a modest 5.8 percent in 1983, advanced 26.2 percent last year to $325.7 billion on a Customs value basis, while exports rose 8.7 percent to $217.9 billion, although this increase did come on the heels of a two-year decline.

It is equally hard to find much good news in the big deficit with Japan, other than the fact that Japan's real role in the seemingly nonstop erosion of the U.S. trade account continued to defy conventional wisdom. The bilateral red-ink entry did soar from $19.3 billion in 1983 to $33.6 billion last year (see accompanying tables), but this hemorrhage represented only one-fourth-plus of the jump in the overall trade deficit. A bigger problem was the $15.5 billion deterioration in trade with developing countries, which shipped $45.5 billion more here than they bought in 1984. Worsening trade results with the European Community and Canada also added to the flow of red ink as 1983's small surplus with the ten-member Common Market was replaced by a $10 billion deficit and the traditional imbalance with Canada slid $6.1 billion farther into the hole to $20 billion.

Although the U.S. trade deficit reached a once-unimaginable magnitude in 1984, it will probably not bottom out until this year. Import expansion should continue to slow even if U.S. economic growth remains robust, but moderate gains in overseas purchases will still translate into big dollar increases. In addition, the skyrocketing dollar could start to trim U.S. sales abroad. Exports to Japan have already slowed although the yen resisted the dollar's advance longer and more strongly than other major currencies. This slowdown, which gathered additional momentum through 1984's four quarters, could be a preview of what will happen to aggregate U.S. exports in 1985.

Susan MacKnight

Notes

- The United States and Japan will eliminate their tariffs on semiconductors, currently 4.2 percent, effective March 1. The two governments had agreed to take this step in November 1983, but could not proceed until Congress passed the necessary legislation.

* * * * * *

The views expressed in this report are those of the authors and do not necessarily reflect those of the Japan Economic Institute.

U.S. Exports to Japan, 1983-84

(in millions of dollars, f.a.s. value basis)

	1983	1984	Percent Change
Total Exports	$21,894.3	$23,575.0	7.6%
Industrial Supplies	8,733.6	9,139.2	4.6
Bituminous Coal	1,002.0	865.4	-13.6
Petroleum Products	639.4	683.1	6.8
Natural Gas	266.8	262.3	-1.6
Nuclear Fuels	152.1	145.7	-4.2
Logs and Lumber	899.7	840.5	-6.5
Paper Base Stocks	479.0	519.9	8.5
Paper and Paper Products	285.4	290.0	1.6
Organic Chemicals	673.9	717.1	6.4
Inorganic Chemicals	633.7	836.4	31.9
Plastics and Synthetic Resin Compounds	330.6	356.6	7.8
Fertilizers and Insecticides	279.1	297.7	6.6
Steel Scrap	218.3	264.9	21.3
Nonferrous Ores and Scrap	308.8	363.8	17.8
Nonferrous Metals	412.9	378.9	-8.2
Textiles	98.4	112.8	14.6
Raw Cotton	499.9	605.1	21.0
Hides and Skins	239.5	325.2	35.7
Leaf Tobacco	338.5	286.0	-15.5
Food and Feed	5,554.7	5,929.2	6.7
Corn	1,764.4	1,999.3	13.3
Sorghum	85.5	269.8	215.5
Soybeans	1,210.0	1,172.7	-3.0
Wheat	589.3	534.4	-9.3
Fruits and Vegetables	418.8	452.6	8.0
Meat and Meat Products	574.2	571.0	-0.5
Fish and Fish Products	505.9	502.9	-0.5
Capital Goods	5,116.4	5,626.6	9.9
Nonelectric Machinery	2,936.4	3,458.5	17.7
Data Processing Equipment	916.6	1,166.2	27.2
Measuring, Testing and Control Instruments	396.8	445.5	12.2
Laboratory Testing and Control Instruments	89.0	93.6	5.1
Scientific, Professional and Medical Equipment	225.5	247.1	9.5
Power Generating Equipment (excl. aircraft and automotive engines)	251.2	307.5	22.4
Oil and Gas Field Equipment	88.5	66.9	-24.4
Metalworking Equipment	91.1	105.5	15.8
Service Industry Equipment	113.6	111.3	-2.0
Electric Machinery	713.2	874.9	22.6
Generators and Transformers	73.3	92.3	25.9
Broadcast and Communications Equipment	323.9	416.7	28.6
Telephonic and Other Electric Equipment	316.0	365.8	15.7

Transportation Equipment	1,466.7	1,293.2	-11.8
Civilian Aircraft	834.8	541.4	-35.1
Civilian Aircraft Engines and Parts	361.0	437.5	21.1
Automotive Parts	144.5	180.2	24.7
Consumer Goods	1,394.4	1,475.5	5.8
Pharmaceuticals	543.8	571.8	5.1
Toys and Sporting Goods	114.4	89.3	-21.9
Cigarettes	80.5	95.4	18.5

U.S. Imports from Japan, 1983-84

(in millions of dollars, Customs value basis)

	1983	1984	Percent Change
Total Imports	$41,183.2	$57,135.0	38.7%
Capital Goods	11,895.8	19,289.6	62.1
Nonelectric Machinery	7,906.8	12,891.0	63.0
Business Machines	3,789.3	6,414.6	69.2
Metalworking Machinery	602.7	896.6	48.7
Agricultural Machinery	224.7	340.9	51.7
Specialized Industrial Machinery	721.5	1,480.6	105.2
Scientific, Professional and Medical Equipment	330.5	477.1	44.3
Electric Machinery	3,756.4	6,029.4	60.5
Transportation Equipment	232.6	368.3	58.3
Automotive Products	14,919.3	18,476.9	23.8
Passenger Cars	10,763.2	12,349.9	14.7
Trucks	2,092.0	2,912.0	39.1
Automotive Parts	2,061.3	3,205.6	55.5
Consumer Goods	8,296.4	11,265.6	35.7
Video and Audio Recorders and Players and Stereo Equipment	2,347.5	3,756.7	60.0
Television Sets	422.9	684.3	61.8
Radio Receivers	246.2	285.5	15.9
Tableware and Glassware	356.1	408.8	14.7
Metal Cookware and Cutlery	397.7	403.5	1.4
Photographic and Optical Goods	845.7	1,038.0	22.7
Clocks and Watches	336.2	437.6	30.1
Toys and Sporting Goods	274.8	412.2	50.0
Motorcycles and Parts	741.0	661.5	-10.7
Clothing	339.7	494.0	45.4
Intermediate Goods	5,391.3	7,275.6	34.9
Steel Mill Products	1,931.3	3,149.9	63.0
Nonferrous Metals	393.3	506.4	28.7
Organic Chemicals	433.3	514.7	18.7
Tires and Tubes	409.1	516.3	26.2
Textiles	581.7	671.0	15.3

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REPORT

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ARMS CONTROL TALKS: AN INTERVIEW WITH THE DIRECTOR OF THE U.S. ARMS CONTROL AND DISARMAMENT AGENCY

Summary

American and Soviet negotiators will meet in March to discuss a new agreement to limit the growth of nuclear weapons. Although this issue tends to be viewed in terms of bilateral security, the results could have a profound effect on European and Asian regional security as well.

JEI political analyst Michael Chinworth recently spoke with Kenneth L. Adelman, director of the U.S. Arms Control and Disarmament Agency since 1983, to explore the impact of these negotiations on Japan and the potential role of the Japanese government in concluding or implementing a new agreement.

Q. What mechanics exist, if any, to keep Japan involved and informed in these negotiations?

A. We have done that in ACDA [Arms Control and Disarmament Agency] to a great extent, and the State Department does as well, because of Japan's interests, especially in the INF realm -- the intermediate nuclear force realm.

We have had Japanese visitors pretty constantly. I know that our public affairs department works closely with the Japanese press. When we were in Japan last July we had quite a few meetings with the Foreign Ministry and the foreign minister. We had press interviews and a roundtable discussion with some experts.

So we have made a tremendous effort. We understand that Japan's security is affected, and not only in the strategic realm but also in the INF realm. The Japanese people and government have been seriously disturbed by the Soviet Union's build-up in SS-20 deployments.

Q. Would you elaborate on that?

A. I think it was true a few years ago that the Japanese did not realize how much the Soviet SS-20 missiles endangered their security. But from my meetings with Japanese -- and I have been there five or six times -- I'm getting a feeling that security issues are becoming more and more prominent in Japan. I think that is all to the good.

Something like the SS-20 triggers a lot of discussion and concern. It is not at a level where people are hysterical, and they shouldn't be hysterical about it. But it's a concern that is a readily identifiable part of the overall Soviet military build-up in the Pacific that has been so ominous through the years. That includes the occupation of the Northern Islands and the stationing of a battalion there; the number of naval deployments going up all the time by the Soviet Union; and the use of Cam Rahn Bay and Da Nang for air and naval facilities by the Soviet Union.

Q. In 1980, you wrote an article that was highly critical of Japanese perceptions of the Soviet threat and the corresponding need for expanding its own defense. Judging from your comments now, is it safe to assume that you believe the conditions that you described then have changed significantly?

A. Yes, I do think that Japanese perceptions of the Soviet threat have changed since 1980. In part this is due to the greatly expanded Soviet presence in and around the Sea of Japan. It is also due to Japanese concern over Soviet deployments of SS-20s to eastern U.S.S.R. Finally, the downing of KAL 007 had a significant impact on Japanese perceptions of the Soviet Union.

Since 1980 the Japanese have taken a number of initiatives to improve defense cooperation with the United States. These include increased defense spending, co-production of military equipment, and frequent consultations. Soviet expansion of its naval forces and modernization of its naval aviation are obvious threats to Japan's strategic position, as well as those of China, Korea and Taiwan.

Q. What about the United States? Is there a corresponding realization of growing Japanese awareness?

A. Very much so. I have been in meetings on INF with the president when Japanese concerns have been expressed, and Japanese considerations have been factored into presidential decisionmaking in this realm. I know that at critical junctures in the INF situation in 1983, the president personally wrote Prime Minister Nakasone to elicit his views on what we should do at the negotiating table. Prime Minister Nakasone responded and his views were important.

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Q. What other specific steps beyond just moral support could the Japanese government take in order to further the negotiations?

A. I think the Japanese government, because of the position it has taken on the three nuclear "nos" -- no possession, manufacture or storage of nuclear weapons, has a very strong moral standing in the world. I think that they can use that moral standing to have the Soviets understand that the moral position in this world is to eliminate an entire class of weapons systems: the intermediate-range nuclear force. The moral position in this world is to really reduce stragetic nuclear weapons, ballistic missile warheads; to get away from the destabilizing systems in place today; and to really make progress in arms control. We want to eliminate chemical weapons altogether and make progress as well in the nuclear testing issue. For example, the president, at the United Nations, offered to have an exchange of experts to calibrate tests at each side's test sites. I think items like that are very, very helpful, and Japan is particularly well suited to make that kind of moral argument.

Q. Don't you think that a little more than moral outrage is necessary to convince the Soviets to agree to an arms pact?

A. Yes, I do. But moral persuasion is still important in the court of world opinion. Success in achieving balanced and verifiable arms control agreements that make a real contribution to global stability and security requires patience, persistence and unity. It requires allied cohesion, strong economies, and public support in democracies.

We are making serious and far-reaching efforts to reduce nuclear and conventional arms, to achieve a comprehensive global ban on chemical weapons, and to forge new bilateral and multilateral confidence-building measures. The pursuit of a more stable peace through a vigorous arms reductions program is an essential part of collective efforts to strengthen Western security and will remain among the highest priorities of the Reagan administration.

Q. What about Japanese conventional defense spending? Does the current expansion in Japan affect the Soviet Union's willingness to negotiate with the United States, or at least provide some substance behind Japan's moral arguments?

A. Increased military spending demonstrates to the Soviets that the Western allies are seriously committed to the defense of their interests and the freedom of their people. Military power -- Soviet military power -- can and is used for political goals. The Soviets, as elsewhere, want greater political and psychological influence over the area around Japan. By ensuring adequate defense efforts, the Western alliance is strengthened and the Soviet perception of what they can obtain by force will be lessened and that will make them more willing to negotiate.

Q. Will these negotiations affect Japanese-Soviet economic or political relations?

A. That's up to the Japanese to decide. I think that the Japanese people obviously have a stake in good arms control agreements. Our security is very intricately tied to Japan's security. And so, I would think that if we could get an arms control agreement that would make the risk for war less likely, the

Japanese would be a big beneficiary in this, as would we. I also think that the Russian people, and the people around the world, would be a beneficiary of such an arms control agreement.

Q. Could Soviet-Japanese economic ties be enhanced by eliminating or significantly reducing security concerns? For example, do you think it could lead to something like Siberian exploration for gas and oil?

A. That is something the Japanese would have to work out with the Soviets. I'm in the exploration business insofar as I can try to explore for good arms control proposals, but not for oil.

Q. Without getting too deeply into the "Star Wars" element, how are the Soviets interested in these negotiations over outer space weapons and how do they affect Japanese security?

A. What the president would like to do is move away from such heavy reliance as we have had over the years for keeping the peace on the threat of mutual annihilation. He wants to see if there isn't a bigger role for defending ourselves and our allies against certain types of nuclear weapons attacks and eventually against all types of nuclear weapons attacks; to change the equation in some way so as to make defense -- defending our people, our allies, our national assets, our retaliatory force -- a better way of preserving the peace than to rely purely on the threat of mutual annihilation.

I think it is a research program worth looking into and worth discussing with the Soviets. What the president would like to do is to enter into a very broad and deep discussion with the Soviet Union on the relationship between offensive and defensive forces. The last time we had such a discussion with them was before the ABM Treaty and SALT I.

Q. Some observers suggest that popular support in Japan for arms control is very strong, but at the same time there is not a great deal of faith in the political leaders entrusted with reaching these agreements. What are your perceptions?

A. My perceptions are that the Japanese hope that arms control can lead to a more stabilizing situation between the United States and the Soviet Union, and that they would be among the beneficiaries of that. I felt that sentiment was very strong among the Japanese people when I was there last July, and I share it very much.

Q. The president and Prime Minister Nakasone met in January on trade and security issues. How high up on their agenda was arms control?

A. I know it's high up on the president's agenda. He's spent an enormous amount of time recently dealing with the subject; we've had several meetings recently with him. He's just devoting an enormous amount of time and effort to the subject, as I believe it's due. I know that he share with Prime Minister Nakasone a sense of the critical importance of preserving peace.

Q. To what extent were Japanese security questions explicitly raised in the January Geneva talks with the Soviets?

A. As I said, when President Reagan met with Prime Minister Nakasone, one of the important topics of discussion was nuclear arms control and the global aspects of the problem. In Geneva, we expressed to the Soviets our concern over the growth of intermediate-range nuclear forces and these -- most notably the SS-20s -- are of serious concern to Japan and our other Asian friends and allies. We expect that as a part of our discussions as negotiations actually begin, issues, such as nuclear testing, which are of particular concern to Japan will also be addressed.

Q. Given the fact that Japan has a big stake in these talks, has the U.S. government given any consideration to formally including the Japanese in some fashion in these negotiations?

A. We will keep them informed as we go along on the negotiations, and I think that is a very proper role, and an important one. They are participating in the Committee on Disarmament, helping us to rid the world of chemical weapons, and that has to be, in my perception, one of the top priorities in arms control in the coming four years. They have also participated very actively in the United Nations First Committee. We work with them in these forums very closely.

Q. Will there be any Japanese role in enforcing a U.S.-Soviet arms control agreement?

A. Well, I think that high on the agenda in the Committee on Disarmament on chemical weapons is the whole question of verification, enforcement and compliance, and we have been working with the Japanese in this area. They have an excellent delegation to the Committee on Disarmament. They do very good work.

* * * * * *

Appendix 1: An Arms Control Glossary

ABM System - Antiballistic missile, a system to counter strategic ballistic missiles or their elements during flight.

Cruise Missile - A guided missile using aerodynamic lift that sustains powered flight through the atmosphere to its target.

Dual-Capable Weapons - Those systems capable of delivering either conventional or nuclear weapons.

Flexible Response - A strategy to deter and, should deterrence fail, to counter aggression at varying levels with appropriate forces.

Intercontinental Ballistic Missile (ICBM) - A land-based fixed or mobile rocket-propelled vehicle capable of delivering a warhead to intercontinental ranges defined in SALT I and II as ranges in excess of 5,500 kilometers.

Intermediate-Range Nuclear Forces (INF) - Land-based missiles and aircraft with ranges/combat radius between short-range nuclear forces and 5,500 km that are capable of striking targets beyond the general region of the battlefield but not capable of intercontinental range.

Multiple Independently-Targetable Reentry Vehicle (MIRV) - Multiple reentry vehicles carried by a ballistic missile, each of which can be directed to a separate target.

Multiple Reentry Vehicle (MRV) - The reentry vehicle of a ballistic missile which is equipped with multiple warheads but which does not have the capability of independently directing the reentry vehicles to separate targets.

Quantitative Limitations - Limits on the number of weapons systems in certain categories, as distinct from qualitative limitations on weapons capabilities.

Short-Range Nuclear Forces (SNF) - Land-based missiles, rockets and artillery that are capable of striking only targets in the general region of the battlefield.

Special Consultative Group (SCG) - The NATO forum for review of the course of the INF negotiations and for consultation on any U.S. steps in those talks.

Standing Consultative Commission (SCC) - A permanent U.S.-Soviet commission established in accordance with the SALT I agreements. Its purpose is to promote the objectives and implementation of the provisions of the various treaties and agreements achieved between the United States and the U.S.S.R. to which it is assigned responsibility.

Submarine-Launched Ballistic Missile (SLBM) - A ballistic missile carried in and launched from a submarine.

Throw-Weight - The useful weight placed on a trajectory toward the target by the boost or main propulsion stages of the missile.

Source: U.S. Department of State

Appendix 2: An Arms Control Chronology

1959	Antarctic Treaty.
1963	June 20: "Hotline" agreement; August 14: Japan signs Partial Nuclear Test Ban Treaty.
1967	Outer Space Treaty. Treaty of Tlatelolco.
1968	Nuclear Nonproliferation Treaty.
1971	February 11: Seabed Arms Control Treaty; September 30: "Accidents Measures" agreement.
1972	Anti-Ballistic Missile (ABM) Treaty.
1974	July 3: Underground nuclear testing limited; November 23: Joint SALT II communique.
1976	Japanese Diet approves Nuclear Nonproliferation Treaty.
1979	SALT II pact announced.
1982	Strategic arms reduction treaty (START) talks proposed.
1983	March 23: Strategic Defense Initiative (SDI) submitted; March 30: revised INF proposals; April 2: Soviet Union declares right to deploy INF systems in Asia to counteract nuclear weapons deployed around Japan; May 29: Williamsburg summit; November 23: Soviets walk out of INF talks.
1984	January: Conference on Disarmament Europe; April: Conference on Disarmament (chemical weapons); May: Updated hotline agreement.
1985	January: U.S., U.S.S.R. conclude preliminary talks on new arms control round.

Sources: Japan Defense Agency, Defense of Japan, 1983; U.S. Department of State, Short Guide to U.S. Arms Control Policy.

Appendix 3: The Military Balance in Asia

Non-strategic nuclear forces deployed by the Soviet Union are aimed primarily at the nations surrounding the U.S.S.R., such as NATO member countries, Japan and China. The 1983 white paper on defense, published by the Japan Defense Agency (JDA), concluded that "it seems that the Soviet Union is trying to divide the United States and such countries to alienate them from each other by deploying a large number of such weapons, thus creating doubts about the credibility of the U.S. nuclear deterrent among the West-camp nations within range of Soviet non-strategic nuclear forces."

Intermediate-range nuclear delivery systems maintained by the Soviet Union in Asia include the SS-20, a mobile missile with a range of about 5,000 kilometers, and the Tu-22M Backfire, a high-performance bomber capable of penetrating air space at low altitudes and high speeds. The SS-20 carries three MIRVed warheads. According to the 1983 white paper, 351 SS-20s have been deployed since 1977. Recent reports indicate that 144 are deployed in the Far East. Eighty of the more than 200 Backfire bombers are in Asia.

The Soviet Union also has deployed considerable conventional forces in Asia. Approximately 370,000 troops, 820 vessels displacing over 1.6 million tons and 2,100 aircraft are deployed in the region. Immediate potential threats are posed to Japan in the Northern Territories, where the Soviet Union has increased its number of MiG-23s from 20 to 40 over the last year. These air forces are supplemented by troop deployments, long-range 130 mm cannons and MI-24 Hind ground attack gunship helicopters. JDA concluded in 1983 that these deployments indicate the importance of the islands to the Soviet Union, but are also aimed at forcing Japan to accept the "established fact of the illegal occupation" of the territories.

Estimated Deployment State of Armed Forces In and Around Japan

Country	Troops (number)	Aircraft (number)	Vessels (number)	Vessels (tonnage)
Soviet Union (Far Eastern)	370,000	2,100	820	1,620,000
China	3,150,000	6,090	1,965	665,000
North Korea	700,000	700	490	66,000
South Korea	520,000	430	110	89,000
U.S. Forces in Korea	29,000	100		
Taiwan	310,000	480	180	86,000
U.S. 7th Fleet		230	65	670,000
Japan	156,000	350	166	232,000

Sources: Japan Defense Agency, Defense of Japan, 1983; U.S. Department of State, Security and Arms Control: The Search for a More Stable Peace.

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Congress Gears Up for Trade Issues

Now that Congress has disposed of organizational matters and the controversial appointment of Edwin Meese as Attorney General, its attention is turning to the budget and pressing trade issues. With a few exceptions -- particularly automotive imports -- trade is still on the back burner, but interest should increase with the announcement of first-quarter trade figures and in discussions on the fiscal 1985 budget.

One of the most significant trade budget issues facing Congress is the Reagan administration's proposal to restructure the Export-Import Bank and eliminate direct loans in favor of interest subsidies to U.S. exporters. The administration is proposing $12 billion in loan guarantees and insurance, a $2 billion boost, and the elimination of the $3.8 billion direct lending program. The Ex-Im budget debate is also likely to raise the issue of export subsidization by foreign governments.

the views of the private sector and with the permission of the Ministers of International Trade and Industry and Posts and Telecommunications. Only one Center may be established. The Center will provide financing and conditional interest-free loans for private research and experiments; promote joint public-private research; accept research commissions from the private sector; employ foreign researchers; offer a data base, conduct surveys, etc.

- The Center's basic capital of Y12 billion ($47 million) and initial operating budget of Y4 billion ($16 billion) will be provided in the fiscal 1985 budget.

- The Center will be established October 1, 1985.

*Unofficial translation.

Source: Ministry of International Trade and Industry Bulletin, February 19, 1985.

Japan's 1984 Balance of Payments Sets Records

1984 was a record-setting year for the Japanese economy from a balance of payments standpoint. The strong demand for Japan's exports and the liberalization of its capital markets are clearly responsible for the all-time-high current account and trade surpluses presented in the following table, as well as the record deficits in long- and short-term capital.

Japan's Global Balance of Payments

(in millions of dollars, IMF value basis, seasonally unadjusted)

	1980	1981	1982	1983	1984(p)
Exports (f.o.b.)	$126,736	$149,522	$137,663	$145,468	$168,268
	(25.2%)	(18.0%)	(-7.9%)	(5.7%)	(15.7%)
Imports (f.o.b.)	124,611	129,555	119,584	114,014	123,917
	(25.4)	(4.0)	(-7.7)	(-4.9)	(8.7)
Trade Balance	2,125	19,967	18,079	31,454	44,351
Services	-11,343	-13,573	-9,848	-9,106	-7,816
	(-19.7)	(-19.6)	(27.4)	(8.0)	(14.2)
Transfers	-1,528	-1,624	-1,381	-1,549	-1,511
	(-35.6)	(-6.3)	(15.0)	(-13.5)	(2.5)
Current-Account Balance	-10,746	4,770	6,850	20,799	35,024
Long-Term Capital	2,324	-9,672	-14,969	-17,700	-49,832
	(117.9)	(-516.2)	(-54.8)	(-18.9)	(-181.5)
Basic Balance	-8,422	-4,902	-8,119	3,099	-14,808
Short-Term Capital	3,141	2,265	-1,579	23	-4,675
	(14.8)	(-27.9)	(-169.7)	(111.1)	(-20,817.4)
Errors and Omissions	-3,115	493	4,727	2,055	4,283
Overall Balance	-8,396	-2,144	-4,971	5,177	-15,200

Note: Figures in parentheses are percentage changes from previous year.

Booming automotive, electronic office equipment and video cassette recorder exports to the United States made a large contribution to the 15.7 percent growth of exports, while falling oil prices and steady commodity prices held import growth to a moderate 8.7 percent.

An upsurge in capital exports accompanied the rise in merchandise exports, and aided by looser controls and new financial instruments, the deficits in the long-term and short-term capital accounts hit record levels. The effects of capital market liberalization are most distinct in quarterly long-term capital balance figures. The net outflow for the first three months of 1984, totaling $5.8 billion, was unremarkable. But the red ink grew by leaps and bounds in the remaining quarters, hitting levels of $14.3 billion, $12.4 billion and $17.3 billion, respectively. December's record $8.4 billion net long-term capital outflow capped an extraordinary year and set the stage for even more red ink in 1985.

The short-term capital market also seems to be enjoying strong domestic and foreign interest. Japanese companies have traditionally minimized the use of short-term financial instruments and foreigners, finding no attractive investments in the market, had relegated it to an ancillary role. As Japanese banks and corporations have become more heavily involved in international finance and as financial regulations have changed, the short-term market has gained increasing attention.

American officials have been pointing to Japan's large trade surplus as a threat to the international trading system, comparing its growth rate with the surpluses run up by oil-exporting countries in the 1970s. What they fail to note, however, is that the net outflow of long-term capital from Japan in 1984 more than offset the trade surplus. Combined with its deficit in services trade, Japan ran a $15.2 billion overall balance of payments deficit -- the highest level since 1979. Moreover, while there was some concern over the willingness of the oil-producing countries to recycle their trade surpluses through international financial markets, there is no doubt about Japan's willingness. A complete picture of Japan's balance of payments shows that Japan is giving as much as it receives, a positive development for the global economy.

Jon Choy

Restraints on Japanese-Made Cars Coming to an End?

With the end of the fourth year of Japan's restraints on U.S.-bound car shipments just a month away, the White House still refuses to acknowledge formally what practically everyone in Washington accepts as a foregone conclusion: that Tokyo will not be lobbied to extend the restrictions for another year. The only questions left, sources say, are the exact timing of Mr. Reagan's decision and whether the president should actually ask the Japanese government to scrap the restrictions or simply let Tokyo take the initiative.

Administration support for limits on Japanese-made car exports to the United States, divided from the start, has steadily waned since the beginning

U.S. Retail Sales of Imported Japanese Cars, 1980-84

(units)

Manufacturer/Seller	1980	1981	1982	1983	1984
Toyota Motor Corp.	582,204	576,491	530,246	555,766	557,981
Nissan Motor Co., Ltd.	516,890	464,805	470,246	521,902	485,298
Honda Motor Co., Ltd.	375,388	370,705	365,865	350,670	374,819
Mazda Motor Corp.	161,623	166,105	163,638	173,388	169,666
Fuji Heavy Industries, Ltd. (Subaru)	142,968	152,062	150,335	156,840	157,385
Mitsubishi Motors Corp.	0	0	3,950	32,755	39,104
Isuzu Motors, Ltd.	0	17,805	15,462	20,731	17,233
Mitsubishi Motors Corp./Chrysler Corp.	129,350	110,940	102,227	103,569	91,718
Suzuki Motor Co., Ltd./General Motors Corp.	0	0	0	0	10,927
Isuzu Motors, Ltd./General Motors Corp.	0	0	0	0	2,077
Total Japanese Imports	1,908,423	1,858,913	1,801,969	1,915,621	1,906,203
Total Imports	2,396,934	2,326,376	2,221,398	2,382,799	2,440,258
Total Domestic Makes	6,578,275	6,206,296	5,756,660	6,795,302	7,951,517
Japan's Market Share	21.3%	21.8%	22.6%	20.9%	18.3%

Source: Automotive News

of 1983, eroded by month after month of sales gains for the U.S. Big Three car manufacturers and two years of record-breaking profits. Commerce Secretary Malcolm Baldrige, long considered the major proponent of curbs on Japanese car exports, was the first convert, coming out last March against a fifth-year extension, but he was quickly joined by United States Trade Representative William E. Brock (see JEI Report No. 12B, March 23, 1984, and No. 19B, May 11, 1984). By the time the renewal issue was put to a formal cabinet vote February 19, not one of the president's top advisers was prepared to make the case for continued restraints.

The unanimous recommendation of the Cabinet Council on Commerce and Trade that Mr. Reagan not ask Japan for another year of export restrictions will be forwarded to him only after review by the State Department and the National Security Council. The president is said to agree with his advisers, but at a news conference February 22, he refused to commit himself. Mr. Reagan suggested that his decision hinges on the steps Japan takes to improve market opportunities for U.S. exporters of telecommunications equipment and other products -- a linkage cabinet officials reportedly opted against.

Both the Japanese government and motor vehicle exporters are proceeding on the assumption that formal restraints will end March 31. Spokesmen are quick to note that this does not mean there will be a big jump in exports. Adjectives like "prudent" and "reasonable" are being used by auto industry executives to describe their U.S. sales strategies in the coming months. They maintain that production capacity constraints at home and limited dealer networks here preclude an export surge. Industry leaders also acknowledge, if only tacitly, that political realities dictate a go-slow approach.

Concerned that a system of self-restraint by the auto industry could easily crumble if Japan's smaller manufacturers try to make up for four years of restricted U.S. sales opportunities, the Ministry of International Trade and Industry (MITI) is examining informal ways to keep exports in check. Each of MITI's options, however, has the same drawback as self-restraint by car exporters: it is open to U.S. challenge on antitrust grounds. The ministry must also figure out how to keep shipments at a politically acceptable level without further penalizing smaller exporters.

While Japanese automotive makers use "reasonable" or "prudent" to describe their export plans, they are reluctant to cite any numbers. At a minimum, it is clear, manufacturers want to ship enough cars to the United States so that inadequate inventories will no longer cost their U.S. dealers sales. Skimpy stocks have plagued dealers ever since a cap was placed on Japanese car shipments, but the real crunch came last year. Despite booming U.S. car demand and a 10.1 percent rise in the FY 1984 export ceiling, sales of Japanese cars fell (see accompanying table). Japanese car makers are obviously anxious to prevent a replay of this situation in 1985.

Susan MacKnight

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The views expressed in this report are those of the authors and do not necessarily represent those of the Japan Economic Institute.

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REPORT

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NEW HORIZONS FOR JAPAN'S NEW MATERIALS INDUSTRY

Summary

Materials exhibiting unusual characteristics are an increasingly important source of innovative high technology products as well as improved traditional equipment. In Japan and the United States, this applicability to the new and old has attracted attention from long-established companies facing mature markets, such as petrochemical and steel companies, and has nurtured a large number of small, specialized firms. This report will present an overview of Japan's new materials industry and evaluate its strengths in comparison with its U.S. counterpart. The respective roles of the Japanese and U.S. governments will also be examined.

The Boom in New Materials

The search for improved materials is certainly not new -- man has sought better substances to improve his tools or meet new needs since ancient times, but today's new materials industry is qualitatively different. The cost and time required to develop new materials has skyrocketed as the methodology has changed. The use of state-of-the-art tools has led to leaps in the existing body of knowledge as well as advances into new areas.

The rapid growth of the new materials industry stems from three sources: its wide applicability; the needs of emerging technologies; and advances in molecular physics, supercomputers and laboratory instruments. In addition to making space travel, satellites and high-performance electronic equipment possible, new materials can contribute to a wide range of mundane products, including home appliances, automobiles, trains, machine tools and so on. Products using new materials often yield better performance to the consumer as well as reduced costs to the manufacturer. The attractions of these materials explains why the critical mass necessary for rapid development was achieved in so short a period of time. Established firms in both countries have played major roles in the industry's growth, but small venture firms can claim credit for equally important contributions. The market is rapidly expanding, providing room for large and small companies to coexist.

Traditional materials, such as steel and aluminum, are being taxed by the demands of high technology because of their inadequate strength-to-weight ratios or limited availability. New materials incorporate characteristics that compare favorably with traditional choices and in some cases are unattainable in those substances. Equally important, they can impart new properties to ordinary materials, opening new markets and leading to new products. The superior energy efficiency of industrial and consumer goods relies increasingly on new materials applications. Some products, such as personal computers and audio equipment, would be impractical or prohibitively expensive if not for recent advances in materials technology. Since both Japan and the United States place a premium on the high technology sector, the new materials industry is viewed as vital to each country's future economic prosperity. It has therefore garnered a large share of the funds devoted to research and development.

The development of new industrial materials used to be a trial-and-error affair based on educated guesswork. Now, however, molecular engineering has advanced to the stage where the guesswork is largely eliminated. Supercomputers and powerful laboratory tools permit researchers to accurately simulate experiments -- increasing the number of runs an individual researcher can perform; reducing the time spent on dead-end paths; and raising the chances of success when real experiments are conducted. The great value of computers derives from their ability to free researchers to ask "what-if" questions and obtain answers quickly and without costly experiments. Errors are quickly uncovered and solutions derived more rapidly using the computer's simulation capabilities. And as researchers have been freed to be more creative and innovative, the rate of discoveries and patent applications has accelerated.

New Materials: Something for Everyone

New materials can be sorted into seven groups.

Metals - Along with new alloys of common metals, rare metals, once considered of little practical value, are taking center stage. Four general research directions are discernible: improved performance steel, aluminum and other structural metals enhanced by rare-metal alloys; shape memory alloys that alter their physical shape in response to temperature changes; storage alloys that absorb and release other substances in response to environmental changes (hydrogen fuel cells, for example); and amorphous metals, which currently find applications in solar cells and recording heads. Research in shape and storage alloys and amorphous metals is particularly interesting because, unlike the quest for improved structural alloys, the theoretical groundwork is just being laid and the potential is still latent.

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Ceramics - Refinements in traditional ceramics techniques as well as raw materials have led to the development of the industry called structural ceramics in this country and fine ceramics in Japan. The attractive properties of ceramics -- good heat conductivity without detrimental effect, low weight, extreme hardness and good corrosion resistance -- have long been known, but only in the past five years have applications beyond dinnerware become possible. By using high-purity powdered ingredients in a rigidly controlled sintering and firing process, complex components can be manufactured that maximize the material's strengths. Ceramic packages for integrated circuits are clearly superior to the plastic counterpart and have gained wide acceptance. Ceramic components are slowly working their way into cars, mostly in areas where heat and corrosive substances quickly wear down metallic parts.

Important problems persist, however. The inherent brittleness of ceramics poses reliability problems in high-vibration environments such as automotive and aircraft engines. As the size and complexity of the component increases, so does the difficulty of assuring consistent quality from current manufacturing techniques. Early predictions of explosive growth and wide acceptance of structural ceramics have been dashed by these problems, but ceramics producers remain confident.

Plastics - The hottest area in new materials centers on a proliferation of plastics with unusual properties. Structural plastics provide the strength of metal and the lightness associated with traditional plastics. The implications in terms of weight and energy efficiency are tremendous; for example, structural plastics could revolutionize the automotive industry. Plastics are well entrenched in the computer industry and could make the jump to wide use in consumer appliances. Traditional plastics have long been employed as electrical insulators, but American and Japanese companies are neck and neck in the race to commercialize plastics that exhibit the opposite quality. Such electroconductive plastics could replace metal wiring and also be molded into equipment cases that shield against electromagnetic interference, both very large potential markets. Finally, specialized plastic membranes, which can separate one constituent element from a mixture, are finding a growing market as the ability of manufacturers to tailor membrane permeability increases. Japanese companies pioneered the use of membranes in desalinization plants, but the competition between researchers around the world to produce membranes permeable to more complex substances remains deadlocked.

The major obstacle to wider use of advanced plastics is their difficult molding characteristics. Large plastic car components are a recent introduction and there are still questions about their long-term performance. Electroconductive plastics are extremely difficult to work with, requiring many processing steps that reduce their cost advantage.

Fibers - Fibers composed of plastic, resin or carbon compounds are increasingly common constituents of aircraft, automotive vehicles and electronic equipment. They are also turning up in such items as bullet-proof vests and lint-free garments for use in ultra-clean semiconductor production facilities. High tensile strength is their greatest selling point, and new uses are being devised continuously.

Composites - While each of the preceding four categories exhibits exceptional qualities individually, they really shine when used in combination with one another and with other materials. Plastics reinforced with carbon or resin fibers have even better strength-to-weight ratios than advanced structural plastics and also exhibit better wear and impact resistance. Metals fortified with silica, boron or other fibers provide a hybrid: the strength of metal with the flexibility of fibers. In applications such as springs, where all-metal parts fail due to fatigue caused by constant bending, fiber-reinforced metals offer significant performance improvements. Even the unlikely combination of metals and ceramics is being pursued. The U.S. Army's Abrams M-1 main battle tank is sheathed with a steel-fiber-ceramic composite armor that offers unsurpassed penetration resistance and low weight.

Semiconductor makers are looking into bonding metal circuits directly onto a ceramic substrate to increase operating range. High prices resulting from more complex manufacturing processes are the biggest drawback to composites, but researchers are focusing on computer-aided engineering, design and manufacturing techniques to cut the price gap.

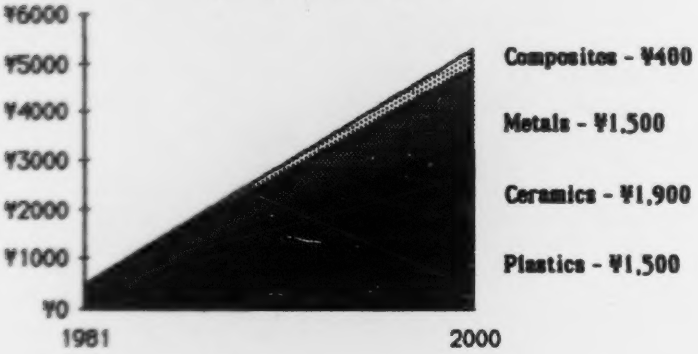
Glass and Crystals - While not as visible as other new materials, glass and crystals made with rare elements offer significant performance improvements in some critical areas. Research into glass panels that reflect heat or radiation is advancing rapidly as is the search for electroconductive glass fibers. If the inherent brittleness of glass can be overcome, the familiar material could show up in surprising places. Crystal technology lies at the heart of the semiconductor industry -- the ability to grow single crystals of silicon is the basis for all integrated circuits. Semiconductor chip technology is rapidly running into the theoretical limitations of silicon, spurring the development of more exotic crystals, such as gallium arsenide (GaAs). Even GaAs-based chips cannot meet the special needs of space vehicles, however, and other combinations are being investigated, including indium phosphide, aluminum arsenide and germanium.

Coatings and Adhesives - Research on coatings runs in two opposite directions: inert coatings and reactive ones. Inert coatings are needed to protect parts from the effects of extreme environments. Coatings that absorb electromagnetic radiation are also gaining increased attention because of their usefulness in electronics and defense applications. Reactive coatings play critical roles in semiconductor manufacturing and in the operation of photocopiers. Resist coatings that have better definition and are easier to use are needed as integrated circuits become more complex. High-speed photocopiers, especially laser printers, rely on fast-reacting light-sensitive compounds to reproduce documents. Researchers are formulating coatings with novel properties in anticipation of new needs.

The Market Takes Off . . .

According to Japan's Ministry of International Trade and Industry (MITI), the direct market for new materials totaled Y500 billion ($2 billion at Y255=$1.00) in 1981 and could grow to Y5.4 trillion ($21 billion) by the year 2000. Growth rates of 650 percent to 1,400 percent are estimated for the various categories, with the composite market jumping to Y400 billion ($1.6 billion) from zero (see Figure 1). In addition, MITI estimates that the total value of products using new materials and goods related to new materials will reach an impressive Y63 trillion ($247 billion) by the end of this century.

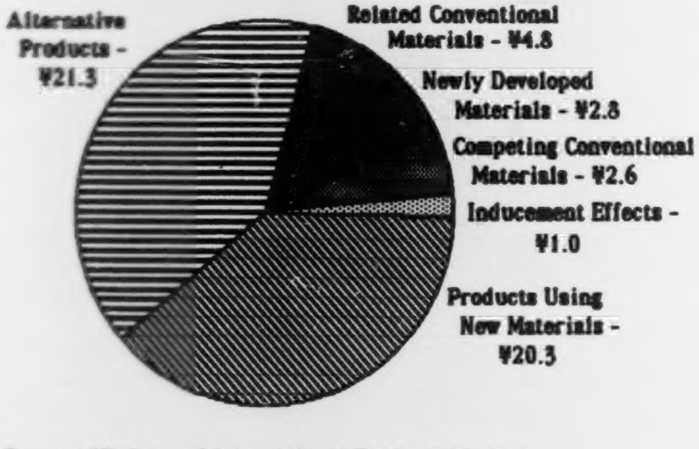
Figure 1: Japan's Projected New Materials Market
(in billions of yen)



Source: Ministry of International Trade and Industry

Beside a Y41.6 trillion ($163 billion) market for products made with new materials, MITI foresees an estimated Y21.4 trillion ($84 billion) market for related products (see Figure 2). MITI's estimates may be conservative -- an advisory body predicts that Japan's annual market for fine ceramics will be in the range of Y2.8 trillion to Y4.2 trillion ($11 billion to $16 billion) by the mid-1990s, and the automotive industry's appetite for structural plastics will certainly be voracious.

Figure 2: Projection for Japan's Total New Materials Market
(in trillions of yen for the year 2000)



Source: Ministry of International Trade and Industry

Piecemeal estimates for the growth of the U.S. market show equally optimistic outlooks. According to the Society of Plastics Industry, the engineering plastics sector grew 25 percent in 1983 to over $6 billion, and is conservatively estimated to increase between 7 and 8 percent a year for the rest of this century. Plastics are also expected to take a large share of the $400 billion electronics market sometime in the 1990s. The society foresees a tripling of the share of plastics in non-structural car parts from 7 percent to over 20 percent by the late 1990s. Private estimates suggest that the growth of electroconductive plastics may run as high as 58 percent annually by 1988.

. . . With Private Companies in the Lead

The new materials revolution is very much the child of private research, development and commercialization efforts. U.S. and Japanese companies have, in many cases, jumped into new materials by building upon their expertise in traditional materials. Steel, chemical and ceramics firms have drawn from a vast pool of skilled researchers and comprehensive data to capture significant shares of the new market. But small companies have found plenty of room by quickly developing highly specialized products passed over by large firms.

Metals - Japanese companies have mounted strong bids to supply the metal needs of the electronics industry and capture the lead in super-conductive magnetic metals. TDK Corp. has developed an inductor-capacitor chip that relies on ferrite-copper-palladium alloys combined with titanium oxide and barium titanate, a development that could contribute to more compact electric machines.

The production of super-fine metallic powders -- the raw material for many electronic components -- is also a Japanese specialty. Japanese advances in magnetic and optical recording media, such as Hitachi, Ltd.'s silver-zinc and silver-zinc-copper optical media alloys, have been greatly facilitated by super-fine powder technology. American companies and research institutes are turning more frequently to Japan as a powder supplier.

Super magnets are vital to advances in several fields of interest: magnetic locomotion, magnetic fusion reactors and mechanical relays. NEC Corp. has developed an iron-cobalt-manganese magnet that is easier to manufacture but offers performance equal to conventional magnets. Super-conductive magnets for fusion reactors and high-speed trains that operate without wheels are under development at several companies, as are high-output compact magnets for aircraft and machine actuators.

U.S. companies lead in the key area of structural alloys. The Aluminum Co. of America will soon bring on line a plant to produce its aluminum-lithium alloy, which offers aluminum's strength with weight savings of 11 to 15 percent. American companies also offer a wider assortment of titanium and nickel alloys, putting them ahead of Japanese competitors in the aerospace market.

The two countries are about even in other areas of metals research, and a good deal of cross investment is taking place. There have been two recent tie-ups in amorphous metals (used as cores in electromagnets and electronic displays). Marko Materials Inc. of Massachusetts has agreed to license its amorphous metals production technology to Toyo Soda Manufacturing Co., Ltd., which hopes to begin production in Japan and the United States by 1987; and Allied Corp. will begin mass producing a range of amorphous alloys in Japan in conjunction with several Mitsui Group companies. Allied's proprietary process could drastically reduce production costs, gaining the venture a major share of Japan's market. In addition, joint production of nonferrous metals has been set by Nippon Kokan K.K. and Martin Marietta Corp., an agreement opening major new markets to both partners.

There have been some frictions involving U.S. imports of Japanese-made titanium sponge and amorphous metals on grounds of alleged dumping or patent infringement. Competition over supplies of strategic metals is also likely to heat up as more exotic alloys gain wider use. Both governments, however, seem to be handling these matters pragmatically.

Ceramics - It is generally acknowledged that one Japanese company, Kyocera Corp., is the dominant player in the structural ceramics market. By some estimates Kyocera has captured 70 percent of the U.S. market and a majority of Japan's business. This has not prevented new companies from entering the field, however. Kyocera's lead is due to an early start coupled with steady investment and attention to customer needs, not to technological superiority. In fact, according to industry observers, a rough technological parity exists between the two countries at the present time, although heavy investment by Japanese firms could tip the balance in their favor.

There are approximately 250 Japanese companies competing in fine ceramics, all but 60 of which are small, venture capital businesses. Small firms have found the field easy to enter because most ceramic parts are customized products, investment requirements are relatively low, and the products are suited to the organizational structure of small companies. Such firms have targeted a wide range of markets: sensors (Nippon Ceramic Co., Ltd.), optoelectro-ceramics (Yamaju Ceramics Co., Ltd.) and cutting tools (Goei Seisakusho K.K.). These companies are constantly looking over their shoulders, however, at the industrial heavyweights that have joined them -- Toshiba Corp., Toyota Motor Corp., Toray Industries Co., Ltd., Sony Corp. and Ishikawajima-Harima Heavy Industries Co., Ltd., to name just a few.

American behemoths have also jumped into the market and hope to make a big splash. General Electric Co., E.I. duPont de Nemours & Co. and International Business Machines Corp. are all active participants in R&D and commercialization activities. American automakers are intensely interested in ceramics, although they are taking a long-term approach. Small U.S. firms are choosing the joint-venture route, and Japanese companies are ardently courted.

The Japanese start-ups have recently scored some points by announcing several significant developments. The Japan Chemical Engineering Co., Ltd. claims that its new ceramic compound can withstand long exposure to temperatures in excess of 2,000 degrees centigrade, making it a good candidate for use in re-entry vehicles. Tokuyama Soda Co., Ltd. has developed a translucent ceramic composed of aluminum-nitride powder. The product's light-transmitting ability could lead to its use in the booming optoelectronics industry. A ceramic with 14 times the flexibility of existing ceramics has resulted from Clay Burn Ceramics Co., Ltd.'s combination of paper-making concepts and infrared drying techniques. Ceramic products subject to heavy vibration or stress are likely candidates for the new material.

Competition in this market will only intensify, and public and private observers in both countries are calling for more investment and closer cooperation to stay in the race.

Plastics - Japanese plastic makers have held a slight lead in structural plastics primarily due to demand from automotive and computer manufacturers. Toyota, Honda Motor Co., Ltd. and other companies have been very aggressive in replacing steel body components with plastics. Forty percent of Honda's subcompact CRX is made of plastics. Moreover, the CRX is the first mass-produced car to use a one-piece plastic body. American competitors have nearly erased the gap, though, with General Motor Corp.'s fast-selling plastic-bodied Pontiac Fiero and duPont's full line of plastics specifically designed for automotive uses.

The race to field electroconductive plastics looks like a dead heat at the present time. Many electroconductives have only been produced in the laboratory and manufacturers in both countries are working hard to bring them to market. Because of the high costs of research and production facilities, large chemical companies dominate this race -- Mitsubishi Petrochemical Co., Ltd., Sumitomo Bakelite Co., Ltd. and Showa Denko K.K. in Japan, and duPont, Minnesota Mining & Manufacturing Co., Monsanto Corp. and Dow Chemical Corp. in the United States. The technical problems of developing an easily moldable product are daunting, but the rewards seem worthwhile; demand should skyrocket as microprocessors are incorporated in cars and home appliances.

Competition in other plastics -- membranes, various films and glass substitutes -- is also balanced. The Japanese are catching up in film technology, while the Americans offer equal membrane expertise. Because this area is dominated by large firms, joint ventures are rare, although it is customary for Japanese companies to farm out actual production of newly developed products to a smaller partner.

Fibers - American companies have a visible lead in applications of particular fibers, if not in their manufacture. DuPont's Kevlar polyaramid fiber is critical to many space applications. Its very high tensile strength is vital to casings, hoses and connectors. DuPont is now pushing Kevlar as a replacement for a host of ordinary materials used in machine belts, fasteners, drilling platform rigging and sports equipment. U.S. firms have also been more aggressive than their Japanese competitors in the use of carbon fibers in a wide range of products, even though the Japanese pioneered production and remain the largest producers.

In response to the utility of carbon fibers in a wide range of applications, Japanese companies have narrowed the gap in this area by investing heavily in developing original polyaramid fibers. Joint ventures have played a role in the growth of this market and cross licensing is fairly common. The demands of the electronics and automotive industry should encourage more rapid development, but American firms are not sitting back; they are expected to maintain an edge, albeit a smaller one.

Composites - Japanese and U.S. companies are on an even footing in most segments of this market -- with the exception of metal-ceramics, where Japan has a slight lead, and carbon composites, where U.S. firms have the advantage. Japanese researchers have recently solved some problems with bonding thin metal films to ceramic substrates and this could lead to rapid commercialization of improved semiconductor components. As yet, Ferro-ECA Electronics, a major U.S. maker, has not matched these advances, but the Erie, Pennsylvania company plans to tie up with Nissan Chemical Industries Co., Ltd. to market metal-ceramic and metal paste wares in Japan.

American dominance in aerospace has allowed U.S. carbon composite makers to acquire experience in producing complex parts and tailoring composites to particular needs. Although Japanese companies have the same materials, including electroconductive carbon fibers and ones derived from coal pitch, they have not had the opportunity to apply them. Since Japan's aerospace programs are moving slowly, the opportunities for Japanese firms to catch up remain limited unless they can break into the U.S. market.

Competition in other fiber-reinforced plastics and metals is more balanced because the demands of the Japanese electronics and automotive sectors provide the same stimulus as the U.S. aerospace, electronics and defense industries. Toyota is already employing a silicon carbide-aluminum amalgam for high-wear parts in its engine pistons -- a move being considered by Detroit. Electroconductive or insulating composites are also undergoing rapid development in both countries to meet the demands of the computer industry.

Glass and Crystals - The edge in this category presently lies in Japanese hands. American companies have yet to match their major competitors' expertise at growing large silicon crystals (currently up to eight inches in diameter), or their advances in producing near-perfect crystals of gallium arsenide. While the United States is ahead in optics for astronomy, Japan holds a wide lead in the far larger markets for smaller lenses and automotive glass. Concern over Japan's lead in semiconductor crystal technology has sparked heated efforts by American companies. Still, the gap is not likely to disappear given the resources Japanese companies are devoting to this field.

Coatings and Adhesives - With only minimal information available on this category, it is not clear if any disparity exists between the two countries' competitive positions. Japan appears to have more advanced know-how in industrial paints, particularly for marine usage, and in coatings that absorb electromagnetic radiation. Adhesives manufacturers appear evenly matched, although Japanese companies may be investing more money in research. This category is so new that any evaluation is extremely tentative.

Governments Off to a Late Start

Direct government involvement in new materials R&D is a relatively recent phenomenon, especially in Japan. For years, however, the U.S. government has exerted a strong indirect influence through its space and defense programs. Government involvement on both sides of the Pacific is likely to balloon, however, given the industry's importance.

Japan - Beyond providing some tax credits for R&D outlays, the government's role in new materials before 1980 was quite small. While it encouraged research in universities, Tokyo did not put funds into targeted new materials projects as it did for electronics. This changed drastically at the start of this decade, however, as the Ministry of International Trade and Industry, the Science and Technology Agency (STA) and Nippon Telegraph and Telephone Public Corp. (NTT) perceived the need for a more organized, government-supported approach.

The Agency for Industrial Science and Technology (AIST) is MITI's main arm for conducting research in new materials. In 1981, AIST initiated a 10-year program to develop basic technologies for future industries, including new materials. With MITI funding, the Engineering Research Association for High-Performance Ceramics, a private group of 15 companies that have hired former MITI personnel, is pursuing the development of high-strength, wear- and corrosion-resistant ceramics. In August 1984, the association agreed to join the United States and West Germany in a project to develop a ceramic car engine -- a goal it had been pursuing independently. Association researchers have announced the development of two heat-resistant ceramics -- a silicon-nitrate version and a silicon-carbide variety -- that can withstand temperatures of 2,200 degrees centigrade for 1,000 hours.

MITI is also pressing ahead in advanced metals technology in its national laboratories. The Electrotechnical Laboratory announced a breakthrough in magnet technology in November 1984 with a heat-resistant magnet using rare earths. MITI has also begun a five-year program to improve the smelting and extraction of rare metals, including gallium, niobium, samarium, yttrium and neodymium. Table 1 shows MITI's fiscal 1985 budget request for new materials projects.

Table 1: MITI's New Materials Budget, FY 1984 and FY 1985

(in millions of yen)

	Requested FY 1985	Actual FY 1984
Next-Generation Basic Technologies Research	Y35,900	Y32,600
Other New Materials Research	17,500	13,700
Fine Ceramics R&D	200	200
Basic New Materials Countermeasures	100	
Industrial Standards Improvement		
Fine Ceramics Standards Survey	200	100
New Materials Standards Survey	200	

Source: Ministry of International Trade and Industry Bulletin, February 1, 1985.

The Science and Technology Agency has mounted an even larger drive in new materials through its network of laboratories and the Japan Research Development Corp. (JRDC). STA and JRDC sponsor the five-year Exploratory Research for Advanced Technology (ERATO) program, with four new materials projects inaugurated in 1981 and budgeted at Y2 billion ($8 million).

- The Hayashi ultra-fine particle project explores the properties of metal particles with diameters of 10 to 2,000 angstroms (one ten-millionth of a meter to two hundred-thousandths of a meter). This project has already discovered that particles of nickel can replace more expensive platinum as a catalyst in many cases; that an alloy of copper and zinc could be useful in the production of methanol fuel; and that super-thin films of gold and germanium exhibit unusual superconductive behavior at different temperatures, with potential applications in electronics.

- The Masumoto amorphous and laminar materials project hopes to develop useful materials based on radically altered molecular structures. It has developed ultra-fine particles of amorphous metals with superior qualities for use in magnetic, catalytic, sensor and super-conductive materials. Ceramic compounds with unusual properties have also been developed, including boron-nitride-silicate and boron-nitride-titanate materials.

- The Ogata fine polymer project has three goals: to synthesize polymers with controllable, high molecular weights; to produce monomolecular polymer films; and to produce polymers with high heat conductivity. The results could lead to super-strong fibers, superior separation membranes and catalysts, excellent thermal conductors for electronic insulators and electroconductive polymers.

- Finally, the Nishizawa perfect crystal project has succeeded in its goal of producing commercially useful defect-free gallium-arsenide crystals. By alternately injecting gallium and arsenine gas into a carefully controlled environment, perfect crystals are grown one molecular lair at a time. It is likely that the project will now work on developing cheaper and more practical methods of growing perfect GaAs crystals and may move to indium-phosphide materials.

STA's laboratories conduct research in other new materials, of which the largest is the National Institute for Research of Inorganic Materials (NIRIM). NIRIM conducts several projects and encourages participation by private industry and universities. Structural ceramics and plastics claim a large share of NIRIM's efforts, although it recently developed a super-conductive metal tape of niobium-aluminum-germanium. The institute has also held a forum on a generalized approach to inorganic material design attended by more than 200 private-sector and government experts.

The Ministry of Education has recently sponsored a broad ceramics program at the Universities of Tokyo, Kyoto, Tohoku and Osaka as well as the Tokyo Institute of Technology. The folowing types of ceramics are being developed: surface active, reactive, electronics and environment-, temperature-, pressure- and opto-sensitive. Although JRDC also funds projects in universities through the provision of interest-free loans, the somewhat feudal university research system hampers research efforts.

NTT's Ibaraki Electrical Communication Laboratory is also involved in the development of electroconductive plastics. Its first breakthrough was the development of a conductive plastic film that can be used as an insulator in computer peripherals and photoelectric and film sensors. NTT's laboratory has also been instrumental in developing materials for the optoelectronics and semiconductor industries, especially improved photo resists for printed circuit production.

United States - Washington has supported research in new materials for decades under the guise of national defense programs. The production of supersonic aircraft and the exploitation of outer space created demand for high performance materials that attracted the research dollars of major U.S. corporations, giving them a distinct advantage that still exists in some areas. At the start of this decade, U.S. R&D was criticized as being too diffused. It was said that a sharper focus would be necessary to remain internationally competitive. This charge was based on the strong challenges mounted by Japan and Western European countries in computers, aviation and spacecraft. Washington's response was to redirect some of the activities at its 755 laboratories and some of the $15 billion budgeted (fiscal 1984) toward specific new materials projects. In 1983, Congress established the Center for Advanced Materials at the Lawrence Berkeley Laboratory to promote government-industry-university cooperation in new materials R&D.

The center's agenda sports studies of gallium-arsenide crystals, ceramics, alloys and advanced instruments. Ceramics and GaAs crystals are receiving the majority of attention, with close cooperation between private and public researchers. Each project is directed by an advisory board of university and industry scientists, and participating firms are urged to send researchers to the center under an "industrial fellows" program and contribute up to half of the project's funding. The center provides research facilities that are too costly for many individual firms to afford and allows public- and private-sector researchers to interact. Two extremely powerful and expensive electron microscopes are available, and the use of other facilities can also be arranged. The center's director foresees his operating budget rising from $2.9 million in fiscal 1985 (a $0.3 million increase over the previous year) to about $20 million annually in a few years.

A Sandia National Laboratories scientist announced a breakthrough in electroconductive plastics last September, and researchers at the Los Alamos National Laboratory are also engaged in new materials projects. These two labs are particularly notable because they have access to a large number of supercomputers. There are new materials projects underway at other government facilities that are beginning to pay off. For example, the Naval Research Laboratory has developed an epoxy fluoropolymer plastic that could vastly improve the performance of artifical joints and organs.

The National Aeronautics and Space Administration's (NASA) Lewis Research Center continues to promote research in the new materials area, primarily through grants. It awarded a $1.7 million R&D contract to AiResearch Casting Co., a division of Garrett Corp., for ceramic engine materials. The 33-month Phase 1 contract focuses on improving silicon-nitride ceramics for turbine blades and could lead to another $1.7 million 27-month contract. NASA has also been instrumental in developing materials that can withstand the rigors of outer space and the fiery heat of re-entry -- areas with important commercial spinoffs.

The Department of Defense (DOD) also continues to play a key role in expanding the performance of industrial materials. The Defense Advanced

Research Projects Agency (DARPA) and the Navy funded a series of tests of ceramic components in turboprop engines in 1980. Further tests were ordered when the engine, which had 102 ceramic components, produced more power with lower fuel consumption than an all-metal version. The Pentagon's VHSIC (very high speed integrated circuit) program has also yielded commercial gains to participating companies, both in terms of improved materials and increased experience in sub-micron chip technology. Composites figure in DOD's plans as well. The replacement for the jeep will sport a body made of fibreglass-reinforced plastic; the Marine Corps' AV-8B Harrier fighter's wings are carbon fiber composites; the X-29's forward-swept wings were impossible before mature composite technology; and the secret "stealth" aircraft will rely on composites for more than half its components.

The commitment of both governments to new materials is therefore pervasive. More importantly, officials in both countries see this commitment growing rapidly and steadily, particularly in high-risk areas. It seems, for once, that Washington and Tokyo agree that the government must take an active role in funding research and promoting better cooperation in this critical industry.

The New Materials Revolution

New materials will certainly pervade everyday life by the end of this century in ways that scientists are only now beginning to envision. The tidal wave of public and private resources hitting the industry guarantees that it will be a prime arena for U.S.-Japan rivalry. Will competitors in this key area learn to coexist? Several factors must be considered here.

Through joint ventures and cross licensing agreements, there are a significant number of businesses on both sides of the Pacific interested in unfettered competition. Since Washington and Tokyo are following similar policies, the likelihood of friction at the official level is reduced. This similarity could work the other way, however, especially if government policies discriminate against foreign companies or are seen as conferring unfair subsidies. There is also a clear trend in the United States toward trade cases based on infringement of intellectual property rights, an already delicate topic between the two countries and one well suited to the nature of new materials. As Japan slowly moves toward legal protections for intellectual property that are similar to American ones, however, this factor should abate.

While some friction is inevitable, it appears that healthy competition in new materials is likely to characterize the U.S.-Japan relationship. American companies are not awed by the Japanese; rather, they espouse a very aggressive stance. Both sides are investing heavily and show no signs of letting up. Such strong competition can only benefit both sides.

For more information, contact Jon Choy.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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REPORT

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White House Bucks Decision on Car Exports Back to Japan

President Reagan announced March 1 that he will not ask Tokyo to extend restraints on shipments of Japanese-made cars to the United States for a fifth year. The decision, which was predictably greeted with applause in Japan and boos from Chrysler Corp., Ford Motor Co., the United Auto Workers union and congressional supporters of continued auto industry protection, throws the touchy question of export volumes after March 31 back to Tokyo. Japanese government leaders had hoped the Reagan administration would signal how many additional cars could be shipped to the United States without triggering a political backlash, but White House spokesman Marlin Fitzwater emphasized that "there are no hidden deals" with Japan on export numbers. Annual shipments are currently limited to 1,850,000 sedans plus 90,833 station wagons and four-wheel drives and 77,000 cars for Puerto Rico.

Two years of robust U.S. car sales and record-breaking profits in Detroit simplified President Reagan's decision -- at least on economic grounds (see JEI Report No. 8B, March 1, 1985). The only real questions were the timing of the announcement and whether action on the restraint issue would be linked to improved market opportunities in Japan for U.S. exporters of telecommunications equipment, forest products, electronics products and medical equipment and pharmaceuticals. The president ended up rejecting the option of an explicit trade-off, but his decision to return to free trade in cars was clearly designed to promote progress in the market access talks. "In taking this action," Mr. Reagan said, "I hope we can look forward to reciprocal treatment by Japan concerning the high-level discussions under way between our countries in the weeks and months ahead."

These discussions are not going well, in part because U.S. trade negotiators, frustrated by what they say is Japanese foot-dragging, have resorted to theatrics. Commerce Secretary Malcolm Baldrige told Under Secretary for International Trade Lionel Olmer to skip a scheduled February 26 meeting on proposed standards, testing and certification procedures for telecommunications equipment in the soon-to-be deregulated Japanese market because Tokyo was unwilling to get down to specifics. At talks on wood and paper products the same day, Agriculture Under Secretary for International Affairs and Commodity Programs Daniel Amstutz decided to go for broke, calling on Japan to eliminate "all barriers," especially tariffs, to trade in forest products.

Reagan administration trade policymakers had originally hoped for some signs of broad agreement in each of the four sets of market access talks by the time American and Japanese subcabinet-level officials held their second meeting the week of March 11. These hopes have evaporated. Talks on medical equipment and pharmaceuticals have not even started; the initial round of discussions on electronics was little more than a fishing expedition by the U.S. side, which has yet to formulate a position on this area of trade; and a shouting match erupted in the preliminary forest products talks. Telecommunications equipment might be the one area where progress can be reported -- if only because the draft of the ordinance that will govern Japan's telecommunications market after deregulation was finally completed this past weekend.

Commerce Under Secretary Olmer held his previously scratched meeting with Posts and Telecommunications Vice Minister Moriya Koyama earlier this week. Initial reports from Tokyo indicate that the two delegations made headway on the certification procedures for telecommunications terminals and some related issues, but remained split on the subject of registration standards for large value-added networks.

Susan MacKnight

The Yen: When It Rains, It Pours

Along with other major currencies, the yen continues to be tossed about in international financial waters by the dollar-driven storm. After a quiet January when the currency moved within a two-yen band, Tokyo exchange markets were hit by buying and selling sprees that pushed the yen up and down over an eight-yen band. Underlying this volatile behavior are the continued short-term attractions of the booming U.S. economy and the abundance of cash-flush Japanese institutions. Japan's net and gross capital outflows have gone from a trickle to a torrent, possibly turning the country into the world's biggest creditor nation.

The dollar's strength pounded European currencies in February; new highs were registered against all currencies despite frequent central bank intervention. The yen, in contrast, emerged bruised but unbowed. After hitting a low of Y263.40=$1.00 at mid-month, it fought its way back up to Y259.50=$1.00 at month's end. Nevertheless, February's average median exchange rate on Tokyo's interbank spot market was a full six yen lower than January's -- Y260.24=$1.00 compared to Y254.18=$1.00. The average daily volume also picked up in the second month of 1985, hitting $1,982 million compared with January's $1,401 million mark.

Bank of Japan governor Satoshi Sumita focused rhetorical and financial attacks on speculators, blasting them in the press and intervening heavily several times in the marketplace. Absent this intervention, the exchange rate would have been extremely volatile. As it was, the yen made some eye-opening moves during the middle of the month. Starting at Y263.40 on February 13, it rose to Y259.90 by the 15th, gained another Y5.30 over the weekend to the month's high of Y254.60=$1.00 on the 18th, but tumbled back to Y260.30 on the 19th.

Central bank intervention is a sensitive topic between the United States and its major trading partners, and both sides pointed to February's events to bolster their positions. Federal Reserve Board chairman Paul Volcker claimed that the dollar's continued gains in the face of heavy intervention by European and Japanese monetary officials showed that not much can be expected of intervention. Other central bank spokesmen argued that the month's events highlighted the importance of strong, coordinated U.S. intervention to shatter speculation in the dollar. Given the Reagan administration's free-market tendencies and the fact that it views the dollar's strength as an asset, heavy intervention is unlikely.

Dollar mania has important effects beyond the trade consequences often recited. As a result of record net capital outflows, Japan is on the verge of becoming the world's largest creditor nation, in stark contrast to the United States, which could become a net debtor nation sometime in 1985. Since registering a $2.3 billion net inflow of long-term capital in 1980 (see JEI Report No. 8B, March 1, 1985), Japan has turned into a major international investor, with net exports of long-term capital jumping from $10 billion in 1981 to $50 billion in 1984 (see table). Coupled with strong direct investments abroad by Japanese companies and a selling wave by foreigners on Japan's stock markets, it is estimated that the country's net external assets almost doubled from $37 billion at the end of 1983 to $70 billion at the close of 1984.

This flood of Japanese funds has raised some concerns among market observers. While the United States certainly benefits from the inflow of capital, the majority of funds have gone into bonds, particularly short-term U.S. government securities. Since these funds remain highly liquid, a massive sellout could trigger a precipitous decline in the dollar's value. While a decline might bring the dollar back into balance with other currencies, a drastic drop could be very disruptive.

Jon Choy

Japan's Long-Term Capital Flows

(in billions of dollars)

	1981-1983	1984	1981-1984
Puchases of External Assets	$82.7	$56.9	$139.6
Direct Investments	13.1	6.0	19.1
Trade Credits	8.6	5.1	13.7
Loans	21.4	11.9	33.3
Securities	34.5	30.8	65.3
Others	5.1	3.1	8.2
Liabilities to Foreigners	40.3	7.1	47.4
Direct Investments	1.0	*	1.0
Trade Credits	*	*	*
Loans	-0.4	-0.1	-0.5
Securities	27.9	-0.2	27.7
External Bonds	11.3	7.4	18.7
Others	0.5	*	0.5
Net Long-Term Capital	42.4	49.8	92.2

Source: Bank of Japan

Japan Seeks to Firm Up Software Development

Japan has proven that it can produce top-flight computer hardware, from individual chips to mainframe systems. State-of-the-art software for business and scientific applications, however, has eluded the best efforts of the private sector and the government. In another bid to bring the domestic software industry up to par internationally, the cabinet will submit to the Diet a Ministry of International Trade and Industry (MITI) proposal to revamp the decade-old government support system. While keeping close watch on developments in Tokyo, American programmers view MITI's latest efforts to spur the software industry as only a distant threat to the dominance of U.S. software.

According to the Science and Technology Agency, Japan's software imports in fiscal 1983 jumped 63 percent to 409 transactions, representing 85 percent of all imports of computer-related technology. Because of American dominance in computers, software programs from this country have dominated the Japanese market for years. Microsoft Corp.'s MS-DOS and Digital Research Inc.'s CP/M claim the majority of microcomputer operating systems, while International Business Machines Corp.'s operating systems remain the industry mainframe standard. Japanese mainframe makers have actually played into IBM's hands by building compatible equipment, making IBM software almost mandatory.

Japanese companies have not been dragging their feet, however. According to MITI, there were over 2,000 independent software houses in the country in 1983, racking up sales of $1.5 billion. In addition, major Japanese computer makers had at least ten software "factories" in operation, each

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INTEGRATION OF DOMESTIC AND INTERNATIONAL FINANCIAL MARKETS: THE JAPANESE EXPERIENCE

PART I OF A STUDY BY SENA EKEN OF THE INTERNATIONAL MONETARY FUND*

Summary

Japan's May 1984 pledge to liberalize its financial and capital markets was hailed in the United States as a watershed agreement. In reality, this pact signaled Tokyo's intention to continue a process that domestic and external forces had set in motion in the mid-1970s. In the following article, the first of a two-part report, Sena Eken, an economist in the Consultation Practices Division of the International Monetary Fund's Exchange and Trade Relations Department, surveys recent changes in Japanese financial and capital markets and assesses the impact of these changes on the internationalization of the yen and on Japan's role in the international financial system.

Introduction

Japan's financial system played a key role during the 1960s in the capital formation process and the allocation of investment resources, and contributed substantially to the successful performance of the economy. However, the country's ever-increasing importance in the world economy and in the international financial system, the substantial structural changes in the domestic economy and the shift in the flow of funds following the oil price increases of 1973-74, and the breakdown of the fixed exchange rate system created an environment with which Japan's financial practices were no longer compatible. In response, major changes in the direction of liberalizing interest rates and financial flows have been implemented since the mid-1970s.

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*Reprinted from Staff Papers, International Monetary Fund, Washington, D.C. (September 1984).

This paper traces the evolution of Japan's financial system during the past decade. Forces affecting the pace and direction of changes are described, and the impact of these changes on the domestic financial system and on Japan's role in the international financial system are discussed. Section I briefly outlines the Japanese financial system during the 1960s. Section II describes the pattern of liberalization of Japan's financial system, first focusing on changes in domestic markets and then on the liberalization of international capital flows. Section III profiles the Japanese financial markets. In Section IV, the impact of the integration of domestic and international financial markets on the internationalization of the yen, on Japan's role as a major financial center, and on the yen exchange rate are analyzed. Section V concludes with a summary and comments on future prospects.

Japanese Financial System During the 1960s

Following World War II, the Japanese economy experienced unprecedented rates of growth, averaging about 10 percent a year during the 1960s. As a result, Japan emerged as the Western world's second largest industrial economy. A high level of investment and the competitiveness of Japanese goods in world markets led to a sharp increase in exports, raising the share of Japan in world trade from 1.4 percent in 1950 to 6.8 percent by 1970. In addition, Japan switched from being a net borrower in international capital markets to being a net lender.

Despite Japan's growing importance in the industrial world and in international trade, its financial system remained highly regulated[1] and cut off from the rest of the world. Features of the system, which had been designed to support the investment-led pattern of growth, included (1) a predominance of indirect financing over direct financing; (2) controls on the quantity and distribution of credit and on interest rates, which were generally below market clearing rates; and (3) a high degree of specialization among financial institutions.

[1] See Hugh Talbot Patrick and Henry Rosovsky, eds., Asia'a New Giant: How the Japanese Economy Works (Washington: The Brookings Institution, 1976); Kazumasa Iwata, "Japanese Financial System and Its Recent Changes," Seminar on Long-Term Economic Cooperation Between Mexico and Japan (unpublished, Japanese Economic Planning Agency, 1982); Yoshio Suzuki, "Changes in Financial Asset Selection and the Development of Financial Markets in Japan," Monetary and Economic Studies (Tokyo), Vol. 1 (October 1983), pp. 29-53; and Eisuke Sakakibara, "The Japanese Financial System in Transition" (unpublished, Japanese Ministry of Finance, n.d.).

During the 1960s, the corporate sector's financial deficit was continuously expanding. Japanese businesses were not able to generate needed capital from internal sources to finance rapid expansion. Direct financing by the corporate sector was also limited, for various reasons. First, because of historical experiences with securities markets, Japanese investors did not yet perceive bonds and stocks as safe assets. As a result of this attitude and the tax incentives for deposit holding, the high level of household savings was predominantly channeled into the banking system. Second, corporate tax policies and the preference of institutional investors to buy new issues at par rather than at market prices (see the subsection Stock Market, below), by increasing the cost of capital raised through the stock market, encouraged financing through bank loans. Third, corporations benefited from close relationships with banks, which also provided managerial expertise and marketing facilities to Japanese enterprises. Fourth, there were restrictions on foreign issues of securities by Japanese companies and on nonresident acquisitions of Japanese equity. As a result of these factors, the securities market in Japan remained undeveloped, and Japanese firms relied heavily on the banking system -- that is, on indirect financing -- for funds.[2]

Interest rates on the supply of credit to firms were set below equilibrium rates and, as a result, there was usually excess demand for credit from the banking system.[3] In these circumstances, Japanese city banks[4] were heavily dependent on the Bank of Japan for funds to meet the demands of their corporate customers. The Bank of Japan used the volume of lending to the city banks and the call market as major channels to implement monetary policy. The setting of the discount rate at levels below market clearing prices created an excess demand for Bank of Japan money and gave the central bank the power to ration credit. By increasing or cutting back on loans to the city banks, the Bank of Japan was able to affect the level of bank loans both directly, through availability, and indirectly, through cost effects as banks were forced to secure funds in the higher-cost call money market. The Bank of Japan also closely monitored the rates and the allocation of funds in the call market and intervened directly through call market brokers. In conducting its monetary policy, the Bank of Japan supplemented its discount policy by window guidance, which set bank-by-bank quotas on loans to customers during periods of monetary restraint. As a result of these mechanisms, the impact of adjustments in monetary policy fell promptly on the volume of bank loans and, consequently, by squeezing corporate liquidity, on economic activity.

Open market operations were not an important policy tool, mainly because of the absence of a well-developed securities market, particularly for government securities. Until the mid-1960s, the Government pursued a balanced budget policy and issued only short-term bills to finance seasonal deficits.

[2] The small amount of government debt and the low level of consumer credit meant that most funds went to corporations for investment purposes.

[3] See Stephen Bronte, Japanese Finance: Markets and Institutions (London: Euromoney Publications, 1982), p. 4; and Suzuki, op. cit., p. 46.

[4] The banking system in Japan consists of 76 ordinary commercial banks (13 city banks, headquartered in major metropolitan centers, and 63 regional banks, headquartered outside metropolitan areas), 3 long-term credit banks, 7 trust banks, and 74 foreign banks.

Since rates on these bills were fixed at low levels, private holdings were negligible, and these bills were generally purchased by the Bank of Japan. Hence, no secondary market for treasury bills evolved. When the Government began issuing long-term bonds to finance public works in 1965, yields on these bonds were fixed by the Government, and the Government's Trust Fund Bureau and the syndicate of financial institutions underwrote them. Banks were willing to do so on the understanding that the Bank of Japan would purchase the bonds in the course of open market operations.

Services provided by financial institutions were restricted, and there was also a high degree of specialization among banking institutions. City and regional banks had to fund their lending through deposits, the interbank market, and borrowing from the Bank of Japan, and were not allowed to issue negotiable certificates of deposit or debentures. Reflecting the short-term nature of their liabilities, their lending was also short term. Long-term credit banks, on the other hand, were allowed to raise funds by issuing debentures but were prohibited from deposit taking.[5] This more stable funding base enabled these banks to provide fixed rate long-term loans. The Japanese Securities and Exchange Law differentiated between banking and the brokerage business, specifically prohibiting banks from acting as underwriters or dealers in the securities market. These limitations on asset/liability choices of financial institutions and access to financial markets served to enforce interest rate controls by limiting substitution among assets and preventing arbitrage among markets.

These characteristics of the domestic financial system were supported by controls on capital flows into and out of Japan. Virtually all capital transactions were subject to government approval, including foreign acquisition of stocks, foreign borrowing by nonbank residents, foreign bond issues, and long-term trade financing. These restrictions were imposed to prevent foreign takeover of Japanese corporations and to prevent Japanese companies from circumventing credit restraints by borrowing abroad. On the other hand, nonresidents were not permitted to float yen-denominated bonds without authorization. This worked to further retard the development of the domestic securities markets. Furthermore, the ability of Japanese banks to borrow in the Eurodollar market was controlled, initially through restrictions on the rate of interest payable for Eurodollars and later through quantitative limits on amounts that could be borrowed. Short-term capital inflows through banks were also restricted by means of yen conversion limits. Finally, although branches of foreign banks in Japan were permitted to supply funds to the call market, they were not allowed to borrow funds from that market or from the Bank of Japan. These restrictions on capital flows were instrumental in preserving the characteristics of Japan's financial structure at that time.

Pattern of Liberalization

The Japanese economy underwent substantial structural changes in the 1970s, in response to a number of internal and external developments. The forces for change came largely from the surge in inflation in the early 1970s, the breakdown of the fixed exchange rate system, and the slowing of economic growth following the oil price increases. These forces created a new economic environment that was not compatible with Japan's past financial practices. As a result, the domestic financial system has been transformed from one dependent on bank lending funded largely by deposits with officially controlled interest rates to one with a variety of assets available to both foreign and domestic investors and in which market forces of both domestic and international origin play an increasingly important role. Furthermore, Japan's financial markets have been virtually freed of formal restrictions on capital flows into and out of Japan, although administrative guidelines remain in effect for certain transactions.

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[5] The only other bank permitted to sell debentures was the Bank of Tokyo, one of the city banks, because of its charter as the country's principal foreign exchange bank.

Although forces for change were experienced worldwide, straining the financial systems of other countries, the changes in Japan were more dramatic and more extensive than in other countries.[6] For example, as shown in Table 1, the financing needs of the public sector increased and the needs of the private nonfinancial sector declined more dramatically in Japan than in the United States and the Federal Republic of Germany. Furthermore, the proportion of funds raised directly in capital markets by non-financial sectors more than doubled in Japan, whereas changes in the role of capital markets were less significant in the other two countries.

Because of its highly regulated nature, the existing financial system in Japan did not permit spontaneous change. Hence, to some extent, the authorities have been able to control the pace and direction of these changes in the financial system. The process of liberalizing interest rates and financial flows and the consequent evolution of the financial system are described in the following sections.

Financial Reform in Domestic Markets - After the first major oil price increases, potential growth slowed, and the expansion in business investment slowed down significantly. As a result, business demand for funds subsided, and companies were able to generate a large share of needed funds from internal sources, including retained earnings, depreciation, and reserves. The Government's deficit began to rise sharply in fiscal year 1975/76 (April-March) as a result of the sharp drop in revenue owing to the severe recession following the oil price increase. With this shift in funding requirements, the public sector assumed the position of major net borrower (Chart 1). To finance its deficits, large amounts of government bonds were issued within a short period. While the sharp drop in revenue was the immediate cause of the increase in government bond issues, the continuing increase in expenditures in the late 1970s contributed to it. Total amounts of government bonds outstanding increased more than eightfold during fiscal years 1974/75-1981/82, from the equivalent of 7 percent of gross national product (GNP) to 32 percent. This resulted in a rapid growth of Japan's primary and secondary bond markets and gave rise to pressures from the financial community for improvements in the efficiency of these markets.

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[6] For a comparison of financial changes in Japan and the United States, see Charles Piggott, "Financial Reform in Japan," Federal Reserve Bank of San Francisco, Economic Review (winter, 1983), pp. 25-46.

TABLE 1. COMPARISON OF FINANCIAL INDICATORS

(In percent)

	1970–71 (Average)			1980–81 (Average)		
	Japan	United States	Fed. Rep. of Germany	Japan	United States	Fed. Rep. of Germany
Gross savings/gross national product	39.15	15.00	27.59	31.70	15.80	21.43
Share of total funds raised by each domestic nonfinancial sector[1]						
Public sector	15.86	26.02	14.42	46.52	28.92	25.74
Private nonfinancial enterprises	66.31	46.23	78.72	35.27	39.25	68.68
Households	17.84	27.76	6.87	18.22	31.83	5.58
Proportion of funds raised directly in capital markets by nonfinancial sectors[1]	17.04	50.35	8.20	39.21	42.82	3.58[2]
Sources of net funds raised by nonfinancial enterprises						
Loans	88.79	47.90	90.98	86.80	63.92	95.02
Bonds	3.82	37.20	3.34	5.32	35.44	1.06[3]
Shares	7.39	14.91	5.68	7.89	0.65[4]	3.93

Sources: Organization for Economic Cooperation and Development, *Financial Statistics*, and *National Accounts* (Paris), various issues; U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington), various issues; and Federal Republic of Germany, *Statistiches Bundesamt, Vollcswirtschaftliche Gesamtrechnunsen*, Vol. 1: *Konten und Standardtabellen* (Stuttgart, 1981).

[1] Includes public sector, private nonfinancial enterprises, and personal sector.

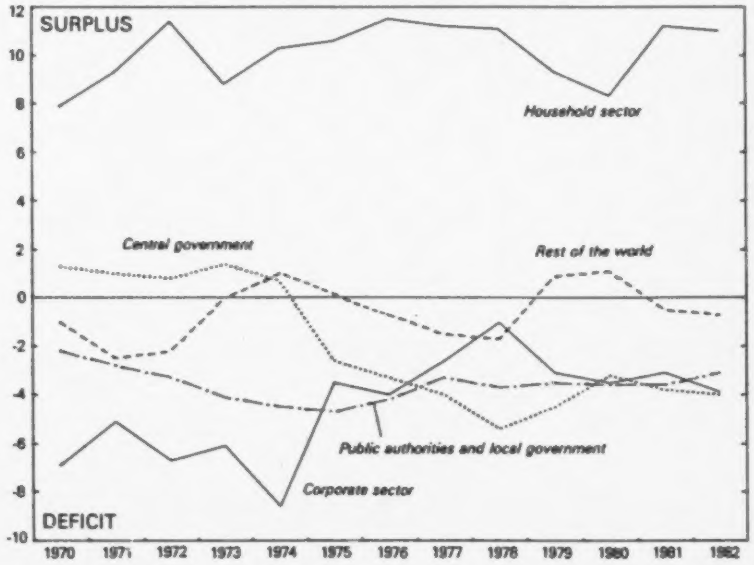
[2] This ratio was unusually low in 1981–82 because of a low level of bond issues. The average for 1978–82 amounted to 9.8 percent.

[3] In 1982, the share of funds raised by bonds amounted to 3.8 percent.

[4] The low average reflects the net repurchases of shares in 1981.

CHART 1. FLOW OF FUNDS: NET FINANCIAL SURPLUS OR DEFICIT BY SECTOR, 1970–82

(In percent of gross national product)



Source: Bank of Japan, *Economic Statistics Monthly* (Tokyo), various issues.

Under institutional arrangements by which long-term government bonds with a maturity of ten years were underwritten by a syndicate consisting of major financial institutions required to purchase and hold for specified periods the bonds they had underwritten, the Government was able to issue large amounts of debt below secondary market yields. In the late 1970s, however, the banks became increasingly reluctant to absorb the large issues of government bonds, for the following reasons. First, the wider availability of instruments (described below) with market-determined interest rates on commercial bank deposits remained insulated from market forces by official regulation. As the amount of government bonds held by banks under the syndicate system increased at a faster rate than their deposits, the share of government bonds in their total assets also rose, resulting in lower profits (Table 2). Second, because of greater interest rate volatility, the risk of capital losses arising from higher interest rates from sales of banks' bond holdings in the secondary market increased. Third, the increased holdings of government bonds lengthened the maturity of commercial banks' assets while their deposit liabilities remained short term, resulting in a growing mismatch of their financial positions.

To increase the attractivness of government bonds to investors, the authorities revised some of the issuing and trading practices.[7] In 1977, the Government began issuing five-year discount bonds. The following year, the Government began issuing bonds with maturities of two to four years through public offerings, which allowed investors to purchase these bonds directly at market rates. This also promoted the development of a secondary market for government bonds. While the financial institutions continued to subscribe to a substantial portion of new government bond issues through the underwriting syndicate system, the share of bonds subscribed by securities houses increased, resulting in larger purchases by corporate and individual investors.[8] This growth and diversification of the government bond market substantially increased investment opportunities and contributed to the widening of the capital market to include broader participation.

By 1979, the commercial banks had ceased net acquisition of bonds and had become more actively involved in selling surplus holdings of government bonds in the secondary market (Table 2). Thus, banks became increasingly reluctant to absorb new issues at rates significantly different from those prevailing in the secondary market. To accommodate new issues of government bonds, the time period required for banks to hold these issues before selling them in the secondary market was reduced from one year to 100 days in April 1981. As a result of these growing linkages between the primary and secondary bond markets, terms of new government bond issues were increasingly set reflecting conditions in the secondary bond markets (Chart 2).

Along with other changes in regulations, a new banking law in 1982 allowed banks, in principle, to purchase, sell, and underwrite bonds. In April

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[7] For a summary of bond issuing practices in Japan, see Table 16 in the Appendix. [Contained in Part II of this report.]

[8] The share of banks as syndicate members declined from 72 percent in fiscal year 1974 to about 63 percent in fiscal years 1981 and 1982.

TABLE 2. JAPANESE CENTRAL GOVERNMENT DEBT, 1972–82[1]

(Amount outstanding; in percent)

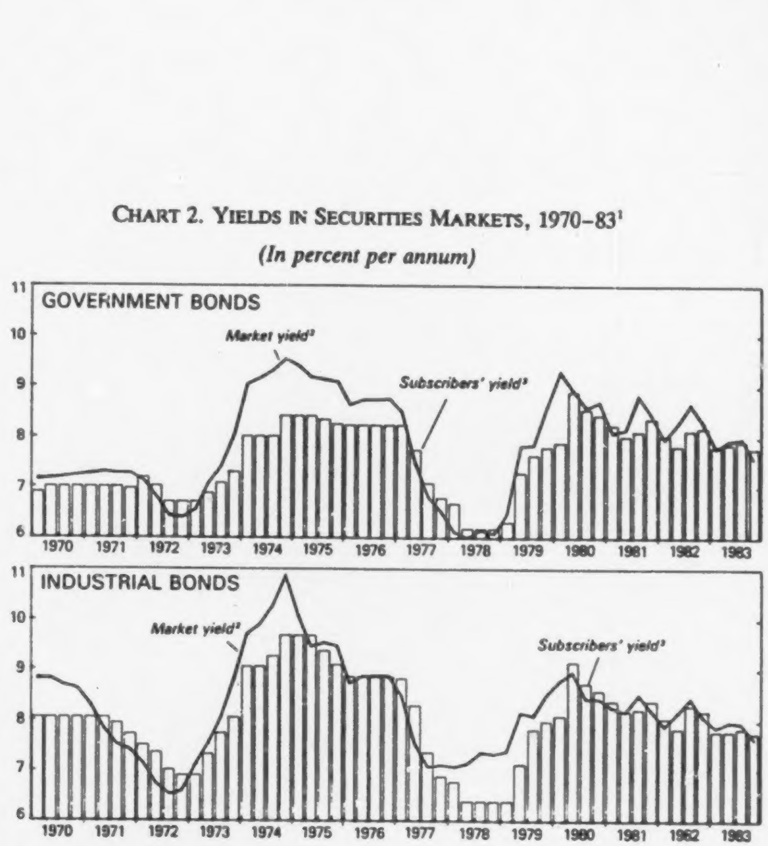
	1972	1976	1979	1980	1981	1982
Fraction of total assets						
Bank of Japan	18.3	49.6	52.7	60.0	70.5	88.5
Private banks	1.8	3.9	10.0	9.1	8.7	7.8
Other private financial institutions	0.6	1.0	3.9	5.3	6.1	7.4
Public financial institutions			13.7	10.7	13.1	13.6
Share held by						
Bank of Japan	20.2	36.7	17.9	20.1	18.4	19.8
Financial institutions	22.5	28.0	62.9	53.5	53.4	51.5
Private banks	17.8	22.4	29.5	23.8	19.6	16.2
Other financial institutions	4.7	5.6	10.4	13.1	14.4	16.4
Public financial institutions			23.0	16.7	19.4	18.9

Source: Bank of Japan, *Economic Statistics Annual* (Tokyo), various issues.

[1] Fiscal years ended in March. Most government debt held by the Bank of Japan is short term, and debt held by private and public financial institutions is mostly medium and long term.

CHART 2. YIELDS IN SECURITIES MARKETS, 1970–83[1]

(In percent per annum)



Source: Bank of Japan, *Economic Statistics Monthly* (Tokyo), various issues.

[1] Quarterly averages.

[2] Market yields of securities with the longest remaining maturity.

[3] Bonds with a ten-year maturity.

1983, the banks were allowed to make over-the-counter sales of new-issue long-term government bonds[9] and in October 1983, of new-issue medium-term interest-bearing and discount government bonds. New issues that are not sold to the public during the specified issue period must be held in banks' portfolios for a minimum of 100 days before being traded. In June 1984, the banks were allowed to deal in government bonds in secondary markets. Although these measures were taken partly to facilitate the issuance of government bonds and partly to help resolve the mismatch between the funding ability of certain financial institutions and their share in the underwriting syndicate for government bonds, they constituted significant changes in the traditional division of functions between banks and nonbank financial institutions.

There was also a change in corporate finance after the mid-1970s. As the Japanese economy began to show signs of recovery, the demand for new funds by the private sector started to grow. Corporations increased their resort to direct means of financing, such as issues of straight and convertible bonds.[10] Factors influencing the shift from indirect to direct financing by corporations included (1) the liberalization of bond issues by Japanese corporations in foreign markets; (2) the increased purchases of government bonds by banks, which reduced available bank financing for corporations; and (3) the realization on the part of corporations that they could not rely on banks as a continuous source of cheap financing. The development of the government bond market was also instrumental in the development of the corporate bond market, as the risk-free government securities provided a reference for determining appropriate bond yields. Primary yields on corporate bonds are influenced by the terms on government bonds: coupon rates on bank debentures and rates on corporate bonds are determined by a preset formula based on government bond rates, and issue prices of corporate bonds are decided by the Bond Issue Adjustment Committee, taking into account the secondary market yields for government bonds.[11] Furthermore, the development of secondary markets made investments in corporate bonds more attractive by increasing their marketability and, hence, their liquidity. This change in corporate finance enlarged the supply of marketable securities, although to a lesser extent than government bond issues. The outstanding level of industrial bonds, which amounted to Y4.5 trillion in fiscal year 1974/75, more than doubled by the end of fiscal year 1981/82. However, during the same period, the share of industrial bonds in total bonds outstanding declined from 12.3 percent to 6.6 percent. Corporate bond issues abroad accelerated in 1977, after the Government removed restrictions on small and medium-sized Japanese corporations floating bond issues.

The considerations described above led to a rapid expansion of the capital market and a diversification of financial instruments and influenced developments in the money markets. In the early 1970s, as a concomitant to official control over the credit extension process, the interbank market remained rigidly controlled. The surge in inflation in the early 1970s, together with constraints on the flexibility of nominal interest rates, increased the volatility of real rates. Also, the decline of corporate sector dependence on bank loans after the oil price increases reduced the effectiveness of the Bank of Japan's window guidance in influencing the level of liquidity. Because of these developments, and reflecting the emphasis placed on controlling inflation, the focus of policymakers shifted from control of bank credit to control over the growth of the money stock. Thus, the short-run transmission of monetary policy actions had to rely on affecting the cost of credit, necessitating greater flexibility in short-term interest rates.

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[9] As well as local government and government-guaranteed bonds.

[10] Corporate bond issues in Japan in general require collateral. Along with the relaxation of the rules for issuance of Euro-yen bonds, which do not require collateral, the domestic collateral requirement for corporate bond issuance was relaxed effective April 1, 1984.

[11] The Bond Issue Adjustment Committee is a private entity which reports to the Ministry of Finance and is made up of securities houses and commissioned banks.

After the first oil price increase, the Bank of Japan began to deregulate interest rates in the short-term money markets, initially by increasing the fluctuations in posted call rates.[12] The posted rates in the call market were discontinued in April 1979. Decontrol of the bill discount market was completed following the introduction of one-month and three-month bills with unregulated interest rates in November 1978 and decontrol of interest rates on two-month bills in October 1979. Although "official controls" over both the bill discount and call markets were removed in 1979, the Bank of Japan maintains a close day-to-day surveillance over these markets and intervenes in both markets, more in the former, to smooth out seasonal fluctuations in the flow of funds and to support the changes in the official discount policy.

Interest rates in the Gensaki market[13] during the 1970s were virtually free of official regulation and offered investors higher yields than could be obtained through bank deposits. While the corporate sector remained a net borrower, corporations with surplus funds and seeking investment opportunities at market interest rates turned to the Gensaki market. As corporations shifted their surplus funds from bank deposits to more attractive Gensaki instruments and increasingly rate-conscious households transferred their money to higher-yielding postal savings accounts, funding of city banks deteriorated.[14] To enable the banks to adapt to the changing financial environment, the authorities permitted the issuance of negotiable certificates of deposit in May 1979, despite strong opposition from long-term credit banks and securities houses.[15] Secondary trading in these instruments began in April 1980. The introduction of certificates of deposit has been important in fostering the intermediation function of banks, as they have increased the funding capacity of the banking system. Although the cost of funds in the certificate of deposit market reflects market conditions, there are ceilings on the total amount that can be issued and restrictions on minimum denominations of individual certificates. The high minimum denomination of the certificates, which attracted corporate rather than household funds, was reduced from Y500 million to Y300 million as of January 1984. Limits on the amount of such issues by Japanese and foreign banks have been gradually raised and further increases are planned. The restrictions on nonresident participation in the Gensaki and certificate of deposit markets were lifted in 1979, opening the way for the integration of Japan's short-term financial markets with those abroad.

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[12] See Table 17 in the Appendix for a summary of the characteristics of Japanese short-term money markets.

[13] The Gensaki market consists of a conditional purchase of a government or corporate bond for a fixed period with a resale agreement at a specified date.

[14] The postal savings system is a major source of funding for the Government's Fiscal Investment and Loan Program. Postal savings deposits offer interest rates comparable to those on bank deposits plus the opportunity for investors to lock in initial deposit rates for up to ten years while having the option to withdraw after six months. About 30 percent of Japanese personal savings is held in postal savings accounts, compared with less than 20 percent in the early 1970s.

[15] Long-term credit banks saw certificates of deposit as strong competitors to debentures, and securities houses were concerned that the certificates would drain money away from the Gensaki market.

The removal of restrictions on banks' participation in the Gensaki market in 1979 facilitated the integration of the interbank markets with unregulated markets outside the banking system, enabling greater interest rate arbitrage across markets. As a result, most of the money market rates have moved parallel and much closer to each other since 1979. The remaining differences in the level of interest rates largely reflect tax treatment of earnings on these assets. However, seasonal movements in some money market rates,[16] though small, suggest that some degree of compartmentalization among money markets remains.

Nonfinancial corporations in Japan may borrow short-term funds in money markets only if they have the appropriate securities to sell in the Gensaki market. The banking law of 1982 in principle authorized the introduction of commerical paper; however, in practice, domestic sales of yen-denominated commercial paper have not yet begun. Domestic sales of foreign certificates of deposit, effective April 1, 1984, are likely to lead to the creation of a full-fledged commercial paper market in Japan. The treasury bill market in Japan remains limited. Although outstanding treasury bills increased from about 3 percent of GNP in the early 1970s to over 5 percent of GNP in the past few years, they do not comprise a large proportion of total government debt. At the end of fiscal year 1982, for example, the proportion was less than 8 percent. These bills are generally issued at rates below market levels and are absorbed primarily by the Bank of Japan. Since 1981, open market operations using treasury bills have been undertaken by the Bank of Japan, though the amounts have remained small. Treasury bills with yields equivalent to those of comparable maturities in the bill discount market are placed with brokers in the bill discount market who are free to sell them to commercial banks, securities houses, and other financial institutions.

Although banks remain subject to official interest rate regulation on most deposit categories, they have recently introduced new types of deposit instruments with market-related interest rates to enable them to compete more effectively for funds. These include a two-year deposit, with the interest rate determined by a weighted average of ten-year bond yields (60 percent

[16] Gensaki rates tend to rise in March and September, as companies cooperate with financial institutions to increase deposits for window dressing, and securities firms use Gensaki instruments to adjust their inventory of government bonds at the end of their accounting period.

weight) and the two-year bank deposit rate (40 percent weight), a bank debenture with compound interest, and a deposit whose maturity can be designated by depositors.

Liberalization of Capital Flows - During the past decade, the rules governing Japan's international capital flows have been greatly liberalized, contributing to a significant increase in financial flows between Japan and other countries (Chart 3). However, adverse developments in the balance of payments and wide fluctuations in the exchange rate of the yen during the 1970s at times resulted in a slowdown or a temporary reversal of the trend toward liberalization (Chart 4).

After the first major oil price increases, when the current account deteriorated and the yen depreciated, the authorities took various measures to liberalize capital inflows. In 1973, limits on nonresident stock and bond purchases were abolished, inward direct investments by foreigners in various industries were liberalized, and nonresident acquisition of free yen account balances was eased for certain transactions. In 1974, ceilings on loans from abroad were raised, the issuing of bonds abroad by residents was facilitated, marginal reserves on nonresident free yen accounts were eliminated, and the withholding tax on payments of interest to sovereign investors was removed. Concerned about capital outflows, the Government, at the end of 1973, banned foreign bond issues in Japan, limited residents' foreign exchange holdings, and restricted overseas lending by Japanese banks.

Following the turnaround in the exchange rate during the fourth quarter of 1974 and the first quarter of 1975, the authorities eased restrictions on resident purchases of foreign securities and allowed Samurai bond issues.[17] During 1976-78, with the yen appreciating, most of the measures taken by the authorities were in the direction of liberalizing capital outflows. In 1976, restrictions on resident purchases of foreign securities were eased, and the frequency of Samurai bond issues was increased. In 1977, the Government granted Japanese foreign exchange banks greater freedom to lend abroad, eliminated the approval requirement for outward direct investments, and resumed the private placement of foreign yen bonds with Japanese institutional investors. However, to slow down capital inflows, in 1977 a 50 percent marginal reserve requirement on free yen accounts was enacted. In 1978, marginal reserve requirements on free yen deposits were increased to 100 percent, and nonresidents were prohibited from puchasing Japanese bonds with less than five years' maturity.

Following the second major oil price increases, the current account deteriorated and the yen again depreciated sharply. During this period, the authorities substantially liberalized capital inflows. In 1979, marginal reserves on free yen accounts were eliminated, nonresident access to the Gensaki market was allowed, the ban on short-term impact loans (foreign currency loans to nonbank residents) was ended, and Japanese and foreign banks operating in Japan were authorized to issue yen-denominated negotiable certificates of deposit, which could also be purchased by foreigners. To slow

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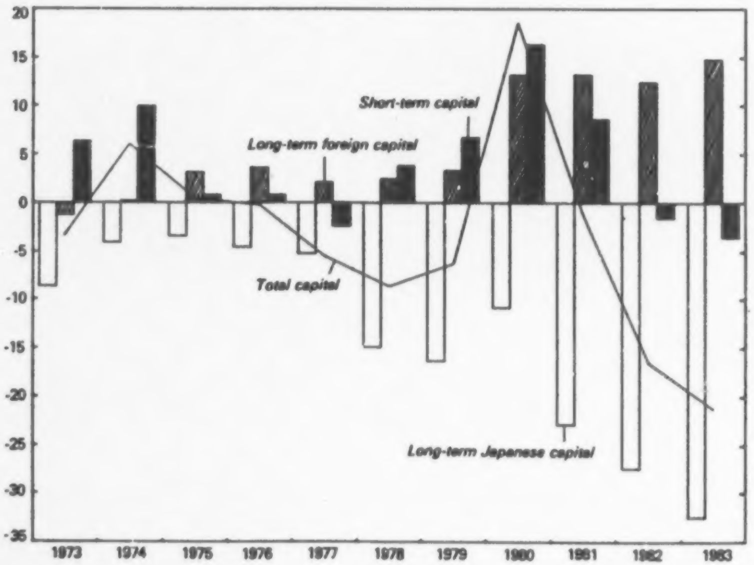
[17] Long-term bonds denominated in yen and issued by foreign borrowers in Japan through public offerings.

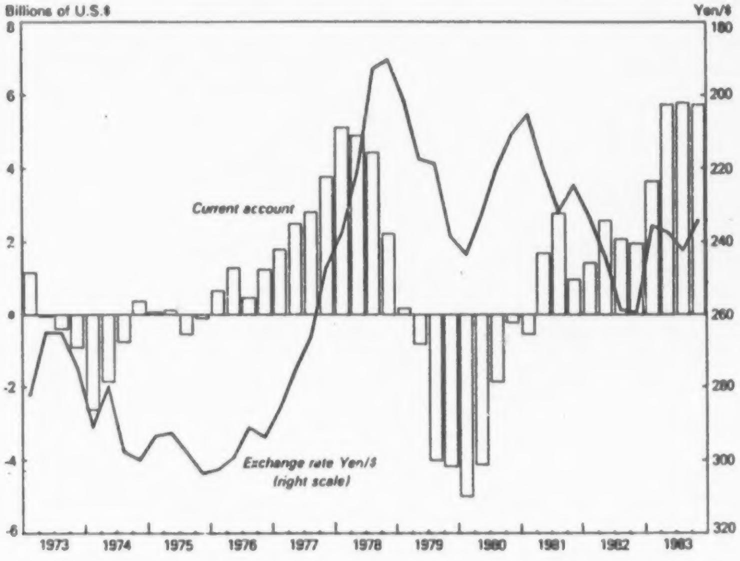
CHART 3. CAPITAL ACCOUNT, 1973–83

(In billions of U.S. dollars)



Source: Bank of Japan, *Balance of Payments Monthly* (Tokyo), various issues.

CHART 4. CURRENT ACCOUNT AND EXCHANGE RATE, 1973–83



Sources: Bank of Japan, *Balance of Payments Monthly* (Tokyo), various issues; and International Monetary Fund, *International Financial Statistics* (Washington), various issues.

down capital outflows, the market for private placement of foreign yen bonds was temporarily closed in late 1979, and banks were asked to be prudent in lending overseas. In the first quarter of 1980, controls on Japanese companies issuing bonds abroad were eased, free yen accounts held by foreign public institutions were exempted from interest rate control, authorized foreign exchange banks were permitted to transfer funds from abroad through their interoffice free yen accounts, and Japanese banks were allowed to make medium- and long-term impact loans. With the turnaround in the exchange rate, loan-by-loan monitoring of foreign lending by Japanese banks was eased during the second half of 1980.

Finally, the liberalization process undertaken during the 1970s led to the passage of the Foreign Exchange and Foreign Trade Control Law in December 1980, which represented a formalization of the principle that all external transactions may be freely carried out unless otherwise specified.[18] In addition to the codification of many of the steps taken in the process of liberalization, the new law significantly affected four types of international transactions: (1) in principle, Japanese banks were allowed to borrow and lend foreign currencies at home and abroad without restriction (but still subject to prudential guidelines); (2) Japanese residents were given unlimited freedom to exchange yen into foreign currencies for deposit with Japanese banks;[19] (3) the scope for foreign portfolio investment in Japan was widened, particularly in equities, with the lifting of the limitation of 25 percent foreign ownership except for a limited list of companies;[20] and (4) Japanese companies were given greater freedom to borrow abroad.

The relationship between the yen rate and the pace of liberalization of capital flows, evident in the 1970s, has not been observed since 1980. Despite the weakening of the yen during most of 1981 and 1982, the authorities generally refrained from imposing restrictions, as they remained committed to continuing the opening up of capital markets. With this aim, in 1981 the authorities lifted the suspension on private placement of bonds by nonresidents imposed in 1979 and relaxed the limits on syndicated loans arranged by Japanese banks. Measures were also taken to encourage inflows, including a reduction of the reserve requirement ratios for foreign currency deposits and a relaxation of restrictions on Japanese banks' subsidiaries regarding the issuance of bonds in foreign markets. In 1982, although securities companies temporarily suspended sales of zero-coupon bonds following a large outflow of funds,[21] capital outflows were generally liberalized despite the continued depreciation

[18] Although, according to the new law, external transactions are generally free, the implementing regulations contain several reporting and prior notice provisions, as well as requirements for approval of some transactions. For details, see Japan Economic Institute, "Capital Market Liberalization in Japan," JEI Report (Washington), No. 10A (March 9, 1984).

[19] Previously, there was a limit of Y3 million.

[20] At present, 11 companies are so designated. The limit of 10 percent remains in effect for a single investor, as an investment of more than 10 percent in a company is considered direct investment and therefore requires approval by the ministries concerned.

[21] The motivation for the suspension of sales of such instruments was presumably related to the tax avoidance aspect of these bonds and to fears that returns promised to investors might not be realized if the markets could not absorb the large sales of these instruments that would be required just prior to maturity to realize the capital gains.

of the yen. Japanese banks were allowed to lend yen long term to borrowers of their choice by removing priority categories on overseas yen lending. Also as part of the liberalization process, yen-dollar swap limits of foreign banks operating in Japan were increased.

During 1983, the authorities took additional measures to liberalize international capital flows. At the same time, to reinforce the Japanese banks' capability to cope with the strains in the international financial system that emerged in the second half of 1982, prudential guidelines on banks' international banking practices were strengthened. City banks' subsidiaries were allowed to issue bonds abroad to increase the parent bank's funding sources for lending abroad.[22] Changes were made in practices relating to yen-denominated foreign bond issues in Japan to increase the flexibility of the issuing procedures and to help accommodate issues of higher denominations and a greater number of borrowers. Euro-yen lending by Japanese banks with one-year or shorter maturity was liberalized completely; such lending was previously limited to transactions related to trade financing.[23] Yen-dollar swap limits for foreign banks operating in Japan were increased by 20 percent, and the limit on the overall foreign exchange position of foreign banks was doubled to $1 million.

Further changes in the liberalization of international financial flows were implemented in April 1984. These included the abolition of the "real demand" principle[24] applied to forward exchange transactions by residents, the introduction of foreign commercial paper and foreign certificates of deposit in the Japanese market, the elimination of the notification requirement on sales of yen-denominated securities, such as government bonds, by authorized foreign exchange banks to foreigners, and the relaxation of rules for the issuance of Euro-yen bonds, specifically lifting the ban on the issuance of such bonds by residents. Concomitant to the easing of eligibility criteria for residents' Euro-yen issues, those for non-residents' issues of yen bonds in Japan were relaxed, and both Japanese residents and foreigners were allowed to swap non-yen bond issues into yen using either the forward exchange market or currency swap techniques.

Regulatory changes in recent years have virtually freed Japan's financial markets of formal restrictions on the international movement of funds. Although they eased substantially during the past few years, administrative guidelines and reporting requirements remain in effect for certain international movements of funds, as they do in most other countries.

[22] The issuance of bonds by city banks in the domestic market continues to be prohibited.

[23] Euro-yen lending with more than one-year maturity still remains subject to prior notice requirements; in fact, no medium-term Euro-yen loans have been extended by Japanese banks.

[24] The requirement of underlying trade or securities transactions for forward exchange transactions by residents.

Profile of Japanese Financial Markets

With the liberalization of the domestic financial system and exchange controls, capital markets in Japan underwent substantial changes.[25] The evolution of the bond, money, and stock markets in Japan since the beginning of the 1970s is briefly described and documented in this section. A brief description of the evolution of the foreign exchange market is also included.

Bond Market - Japan's bond market has expanded rapidly during the past decade. The rapid increase in government bond issues has been the major factor contributing to the expansion of the market in terms of the volume of issues and transactions (Table 3). In 1969/70, new bond issues in Japanese capital markets amounted to Y4,346 billion, of which public sector bonds accounted for 31 percent. By 1981/82, the amount of new issues had reached Y33,119 billion, a compound annual rate of increase of over 18 percent. The public sector share increased to about 52 percent. The sharpest increase was in issues of central government bonds, whose share in the total more than quadrupled to 39 percent. During the same period, total bonds outstanding increased from Y15,597 billion to Y146,121 billion, with the share of government bonds increasing from less than 16 percent to more than 56 percent.

Since the beginning of the 1970s, developments in the secondary bond market have been even more dramatic. The total amount of bonds traded increased from Y6,500 billion in 1969/70 to Y312,000 billion in 1981/82, and the share of central government bonds in total transactions increased from a mere 5 percent to almost 64 percent. This implies that the trading in central government bonds increased at a compound annual rate of 70 percent during this period.

A significant change in the maturity distribution of long-term bonds outstanding has also been taking place. In 1975, the Government first issued large amounts of deficit-financing bonds with a ten-year maturity. As a result, in the next few years, there will be large amounts of short-term bonds (bonds approaching maturity) in the market. This will expand the opportunities for trading in government securities with very short remaining maturities.

In addition to yen-denominated bonds issued by residents, two kinds of yen-denominated bonds are issued in Japan by foreigners: Samurai bonds issued on the Japanese market through public offerings, and bonds privately placed with Japanese institutional investors. The growth of foreign yen bonds has not been very steady because developments in this market were linked to Japan's balance of payments position and official policy toward capital flows (Table 4). After the oil price increases in 1973-74, the market for foreign yen bonds was closed; the Samurai bond market was reopened after 20 months in July 1975, and private placements were resumed after three and a half years in June 1977. After the oil price increase in 1979, the Government did not ban new public issues of Samurai bonds, although they were depressed because of high interest rates and the volatility of the yen. However, the market for

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[25] For a detailed description of Japanese financial markets, see Bronte, op. cit.; and Robert F. Emery, The Japanese Money Market (Lexington, Massachusetts: Lexington Books, 1984).

TABLE 3. BONDS ISSUED, OUTSTANDING AND TRADED, 1969/70–1981/82

(In billions of yen)

	1969/70	1972/73	1974/75	1975/76	1978/79	1979/80	1980/81	1981/82
Total bonds issued	**4,364**	**9,225**	**11,607**	**17,157**	**27,305**	**30,540**	**32,739**	**33,119**
Public sector bonds	1,353	3,543	4,104	7,573	14,598	17,517	18,182	17,075
Central government	*421*	*1,968*	*2,200*	*5,362*	*10,792*	*13,635*	*14,264*	*12,950*
Local government[1]	*82*	*120*	*177*	*311*	*697*	*815*	*729*	*681*
Public corporations	*850*	*1,455*	*1,728*	*1,900*	*3,109*	*3,067*	*3,190*	*3,444*
Private sector bonds	3,011	5,682	7,503	9,584	12,707	13,023	14,557	16,043
Industrial bonds	*495*	*655*	*987*	*1,504*	*1,313*	*1,298*	*994*	*1,269*
Bank debentures	*2,516*	*5,027*	*6,516*	*8,080*	*11,394*	*11,725*	*13,563*	*14,774*
Total bonds outstanding	**15,597**	**26,506**	**36,697**	**47,007**	**89,830**	**108,408**	**128,211**	**146,121**
Public sectors bonds	7,510	13,120	18,860	25,550	59,674	76,109	93,260	107,908
Central government	*2,463*	*5,818*	*9,658*	*14,973*	*42,645*	*56,251*	*70,510*	*82,273*
Local government[1]	*428*	*572*	*757*	*991*	*2,398*	*3,138*	*3,784*	*4,342*
Public corporations	*4,619*	*6,730*	*8,445*	*9,586*	*14,631*	*16,720*	*18,966*	*21,292*
Private sector bonds	8,087	13,386	17,837	21,457	30,156	32,299	34,951	38,213
Industrial bonds	*2,616*	*3,680*	*4,518*	*5,537*	*7,300*	*8,227*	*8,794*	*9,588*
Bank debentures	*5,471*	*9,706*	*13,319*	*15,920*	*22,856*	*24,072*	*26,157*	*28,625*
Total bonds traded[2]	**6,500**	**18,300**	**39,000**	**57,600**	**206,300**	**229,700**	**289,900**	**312,000**
Of which: Central government	320	550	1,800	1,300	69,800	114,100	168,400	199,100

Source: Data provided by the Japanese Ministry of Finance.

[1] Excludes bonds issued by private placement.

[2] Includes over-the-counter transactions.

TABLE 4. ISSUES OF FOREIGN YEN BONDS, 1970–82

(In billions of yen)

Fiscal Years	Samurai Bonds		Private Placements	
	Issues	Amount	Issues	Amount
1970	1	6	—	—
1971	3	33	—	—
1972	6	85	1	11
1973	3	40	6	40
1974	—	—	—	—
1975	2	20	—	—
1976	6	65	—	—
1977	15	296	3	30
1978	29	722	11	105
1979	16	333	6	67
1980	14	261	—	—
1981	28	495	12	118
1982	37	663	30	193

Source: Nomura Securities, *Manual of Securities Statistics* (Tokyo), various issues.

private placements was closed for 16 months, until February 1981. With the liberalization of regulations, there was a significant increase in foreign yen bond issues in the following two years, the level of new issues reaching ten times the level registered a decade ago.

Short-Term Money Markets - Short-term money markets in Japan consist of the call market, the bill discount market, the yen certificate of deposit market, and the Gensaki market. Outstanding balances in the short-term money markets increased from Y2.4 trillion at the end of 1970 to Y18.6 trillion at the end of 1982, a compound annual rate of increase of over 18 percent (Table 5). However, developments in individual markets have been diverse.

At the beginning of 1970, the call market and the relatively small Gensaki market were the only short-term money markets in Japan. Balances in the call market, which averaged less than Y1.5 trillion during 1970-73, amounted on average to Y2.5 trillion in the following five years. After the liberalization of interest rates in 1979, there was some increase in outstanding balances. However, these remained at about Y4.5 trillion in 1980-82. A separate bill discount market, which was established in May 1971, grew rapidly in its first few years, and by 1978 outstanding balances in the bill discount market were almost three times the level of outstanding balances in the call market.[26] Although its growth was slowed by the development of the certificate of deposit market, at the end of 1982 the bill discount market was Japan's largest short-term money market, with outstanding balances exceeding Y5.4 trillion.

Negotiable yen-denominated certificates of deposit were first introduced in May 1979, and secondary trading in these instruments began in April 1982. Even though these certificates were not issued until a few years ago, by the end of 1982 outstanding balances amounted to about one fourth of total balances in Japan's money markets. Foreign interest in these certificates appears to fluctuate with the value of the yen.[27] The Gensaki market expanded steadily in the 1970s. However, with the introduction of negotiable certificates of deposit, transactions in this market slowed. The lifting of restrictions on both nonresident participation and the limit on city banks' debt outstanding in the Gensaki market spurred a revival of the market. Outstanding balances remained at about Y4.4 trillion in 1981 and 1982. The share of foreign investors in purchases in the Gensaki market has increased steadily from 2.5 percent in 1980 to 14.0 percent in 1982.

Stock Market - The growth of the Japanese stock market has been uneven during the past decade. After reaching a record high in 1972, the number of shares traded began to decline after the first large oil price increase in 1973-74 (Table 6). In 1975, the volume of trading was only 62.9 billion shares, less than half that of three years earlier. This trend was reversed in

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[26] Short-term bills issued by the Bank of Japan and "accommodation bills" issued by banks are traded in the bill discount market (see Table 17, Appendix).

[27] For example, in mid-1980 foreign purchases amounted to 10 percent of the outstanding issues; the weakening of the yen led to liquidations of these positions, and foreign holdings dropped sharply by the end of the year.

TABLE 5. OUTSTANDING BALANCES IN MONEY MARKETS, 1970–82

(In billions of yen)

End of Year	Call Market	Bill Discount Market	Yen Certificate of Deposit Market	Gensaki Market
1970	1,816.9	—	—	619.0
1971	1,472.3	—	—	882.0
1972	1,048.2	802.5	—	1,224.0
1973	1,226.7	2,447.9	—	1,738.0
1974	2,159.5	4,399.6	—	1,673.0
1975	2,331.6	4,403.3	—	1,835.0
1976	2,567.1	5,091.0	—	2,084.0
1977	2,616.4	6,084.0	—	3,136.2
1978	2,326.0	6,590.2	—	4,206.9
1979	3,472.5	6,326.8	1,819.8	3,960.4
1980	4,133.3	5,738.1	2,357.4	4,506.8
1981	4,698.7	4,015.5	3,290.7	4,481.0
1982	4,493.5	5,412.8	4,342.0	4,303.5

Source: Bank of Japan, *Economic Statistics Annual* (Tokyo, 1982).

TABLE 6. TRADING ON STOCK EXCHANGES, 1970–82[1]

Year	Sales Volume (million shares)	Sales Value (billion yen)
1970	57,099	12,030
1971	81,436	18,851
1972	135,475	28,814
1973	79,361	20,139
1974	65,081	15,933
1975	62,854	18,976
1976	82,597	27,930
1977	85,111	25,527
1978	118,493	38,880
1979	115,594	40,879
1980	118,931	42,161
1981	128,317	58,747
1982	91,240	42,668

Source: Bank of Japan, *Economic Statistics Annual* (Tokyo, 1982).

[1] Includes Tokyo, Nagoya, Osaka, and Kyoto Stock Exchanges.

the following years, as the number of shares traded increased steadily, reaching 128.3 billion shares in 1981. Major factors behind this growth were the shift by Japanese corporations from indirect to direct financing, the increases in inward foreign investment, and the high investment returns on stocks.[28]

Although share issues in Japan did not show a steady trend in the 1970s, there was a shift from new share issues at par toward new share issues on the market (Table 7). In 1970, new issues at market prices accounted for only 20 percent of total domestic equity issues, as companies traditionally issued new equity at par value to existing shareholders or employees of the firm as part of a profit-sharing program or a wage package. New shares issued on the market, which allowed profitable companies access to cheaper sources of funds, rose sharply in the past decade, except for a temporary reversal after the oil price increases in 1973. In 1982, the share of market issues in the total amounted to 82 percent.

Trading on the stock exchanges in Japan increased from Y12.0 trillion in 1970 to Y28.8 trillion in 1972 (see Table 6). However, this unprecedented growth was not long-lived, and, following the sharp increase in oil prices, trading declined to Y15.9 trillion in 1974. In subsequent years, sales increased continuously and reached a record high of Y58.7 trillion in 1981. Because of the low level of trading during the first three quarters of 1982, reflecting the low level of foreign equity purchases, trading in 1982 declined to Y42.7 trillion.

Foreign investment in Japanese securities has also fluctuated substantially (Table 8). Purchases of Japanese stocks by foreigners, which amounted to $2.8 billion in 1972, declined to $0.6 billion in 1974 after the oil price increases. After the oil price increase in 1979, however, foreign interest in Japanese stocks increased sharply, as oil producing countries began to diversify to yen instruments. Further, the Foreign Exchange and Foreign Trade Control Law of 1980 eased investment procedures for foreign investors and lifted ceilings on foreign investments in a specific company.[29] As a result, foreign purchases of stocks, which amounted to less than $5.5 billion in 1979, reached about $25 billion in 1981. As the economic situation of oil producing countries began to deteriorate and the yen continued to depreciate, foreign investments in Japanese stocks declined in 1982. There was a sharp increase in investments in Japanese stocks in 1983,[30] especially in high-technology-related stocks, as Japanese stocks appeared relatively undervalued after the surge in the New York market in late 1982. There was also a substantial increase in purchases of stocks in Japanese industries centered on export sectors in anticipation of global economic recovery.

[28] See Bronte, op. cit., p. 169. The annual average return during 1970-79 was 18.3 percent in Japan, compared with 6.2 percent in the United States.

[29] At present, only when a foreign takeover "would have a major impact on the nation's economy or security" is the purchase of more than 25 percent of a firm's share subject to prior review. The ceiling of 10 percent for a single investor remains in effect.

[30] Net foreign investment in Japanese stocks during January-September 1983 amounted to over $3.8 billion.

TABLE 7. NEW SHARE ISSUES BY TYPE, 1970–82

Year	Share Issues on the Market		Issues at Par		Total	
	Number of issues	Amount raised (billion yen)	Number of issues	Amount raised (billion yen)	Number of issues	Amount raised (billion yen)
1970	171	132.7	282	523.5	453	656.2
1971	121	76.7	201	431.3	322	508.0
1972	239	637.7	177	361.1	416	998.8
1973	206	519.9	172	349.6	378	869.5
1974	167	261.8	188	246.0	355	507.8
1975	87	212.4	140	757.4	227	969.8
1976	160	484.9	95	176.0	255	660.9
1977	196	565.5	133	307.5	329	873.0
1978	162	530.4	76	316.4	238	846.8
1979	189	580.2	67	313.3	256	893.5
1980	177	842.3	41	156.0	218	998.3
1981	210	1,331.0	70	516.9	280	1,847.9
1982	174	1,048.0	148	236.5	222	1,284.5

Source: Tokyo Stock Exchange.

TABLE 8. FOREIGN INVESTMENT IN JAPANESE STOCKS, 1970–82

(In millions of U.S. dollars)

Year	Purchases	Sales	Net
1970	1,020	865	155
1971	1,579	1,149	430
1972	2,762	2,410	352
1973	1,699	2,337	– 638
1974	605	1,738	– 1,133
1975	2,064	1,474	590
1976	2,960	3,068	– 109
1977	2,671	3,446	– 775
1978	4,830	5,635	– 804
1979	5,486	6,171	– 685
1980	12,171	7,183	4,988
1981	24,972	21,450	3,523
1982	17,276	15,664	1,612

Source: Data provided by the Japanese Ministry of Finance.

Foreign Exchange Market - The Tokyo foreign exchange market expanded rapidly during the past decade. Trading volume, which totaled $11.8 billion in 1970, was about $1,213.6 billion in 1982 (Table 9). Several factors were influential in this growth. Trade transactions increased sharply; the internationalization of Japanese companies led to increased yen lending to finance investments and to profits being remitted back in U.S. dollars; favorable developments in the economy increased the demand for yen as an investment medium, thus increasing capital flows into Japan; the liberalization of Japanese markets increased nonresident investment opportunities in yen-denominated assets; with the liberalization of access of Japanese companies to markets abroad for funding, conversion of these funds into yen in Tokyo increased; again with the liberalization of exchange controls, Japanese portfolio managers and corporate treasurers began to invest abroad; and brokerage commissions were reduced on several occasions, bringing them in line with charges in other countries.[31]

To complement the foreign exchange market, a dollar call market was created in 1972 which allows banks to settle their foreign exchange transactions in Tokyo instead of abroad and to invest their foreign exchange positions locally. Transactions in the Tokyo dollar market remain restricted to resident foreign exchange banks. Nevertheless, the volume of transactions in this market has increased markedly in the past few years (Table 10), owing largely to sharp fluctuations in dollar interest rates, which made banks more concerned about time lags; the foreign exchange law of 1980, which allowed banks to increase their domestic dollar liabilities; and reductions in brokers' commissions. The dollar call market is still relatively small, with a daily turnover of $1.3 billion and an outstanding balance of $32.1 billion in 1982, less than 5 percent the size of the Euromarket.

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[31] The commission for spot dollar transactions, the most common form of dealing, is Y600,000 per $1 million for each party to a transaction.

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Part II of this report will appear March 29, 1985

TABLE 9. VOLUME OF SPOT, FORWARD, AND SWAP TRANSACTIONS IN TOKYO FOREIGN EXCHANGE MARKET, 1970–82

Year	Turnover (million U.S. dollars)			
	Spot	Forward	Swap[1]	Total
1970	4,915	4,237	2,604	11,756
1971	20,537	5,398	3,423	29,358
1972	13,027	11,241	4,872	29,141
1973	20,194	18,175	8,558	45,927
1974	18,891	24,305	16,115	59,311
1975	22,919	25,960	24,551	73,430
1976	34,972	28,616	34,924	98,512
1977	62,305	24,611	60,363	147,279
1978	117,890	34,767	128,886	281,543
1979	172,210	51,751	221,042	445,003
1980	211,844	66,782	300,593	579,219
1981	296,432	77,696	527,948	902,076
1982	365,260	63,283	785,034	1,213,577

Source: Data provided by the Bank of Japan.

[1] A simultaneous purchase and resale, or sale and repurchase, of currency at a later date.

TABLE 10. TOKYO DOLLAR CALL MARKET, 1972–82

(In millions of U.S. dollars)

Year	Turnover	Outstanding Balance
1972	5,574	352
1973	18,921	718
1974	32,979	1,282
1975	41,779	1,300
1976	45,171	1,230
1977	53,795	1,350
1978	69,241	2,701
1979	125,909	4,941
1980	189,992	11,564
1981	276,207	23,834
1982	480,451	32,122

Source: Data provided by the Bank of Japan.

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REPORT

NO. 11B
March 22, 1985

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Japan Answers Telecommunications Calls

Responding to American concerns about the April 1 deregulation of Japan's domestic telecommunications market, Japanese negotiators have shown increased flexibility on regulations influencing market access for foreign firms. Tokyo signaled its willingness to alter the regulations at subcabinet-level talks attended by Commerce Under Secretary for International Trade Lionel Olmer and W. Allen Wallis, Under Secretary of State for Economic Affairs, in Tokyo March 14 and 15.

Not only are negotiators pressured by imminent deregulation but also by the rapidly ballooning bilateral trade imbalance in telecommunications equipment. According to the Communication Industries Association of Japan, exports of telecommunications equipment to the United States rose 73 percent in

What is interesting about this list is the extra protection given the American specialty steel industry. Domestic makers have complained loudly about the limited product coverage of the orderly marketing agreements negotiated in 1983 with Japan and other major suppliers of stainless and alloy steel. They have been equally vocal about the fact that flat-rolled products are subject to higher tariffs, not quotas (see JEI Report No. 26B, July 15, 1983, and No. 41B, October 28, 1983). By flagging a number of Japanese-made specialty steel products for monitoring, Washington obviously hoped to head off some criticism from the U.S. industry.

One of the few surprises about the steel-restraint pact is that Tokyo gave in to the Reagan administration's last-minute demand for a ceiling on exports of fabricated structural products. Under a five-year agreement separate from the main accord, Japanese steel mills will limit shipments of welded H beams and bridges, towers and similar structures to 100,000 short tons annually. This cap, U.S. producers hope, will prevent shifts in Japan's export mix toward higher value-added goods. Similarly, American manufacturers of semifinished steel products (ingots, blooms, billets, slabs and sheet bars) expect some import relief since Japanese shipments will be held to 100,000 short tons a year.

The Ministry of International Trade and Industry (MITI) now has the tough job of allocating the six category quotas and the seven subcategory quotas among Japanese steel makers, which are still upset about being included in the Reagan administration's steel-restraint program. Takashi Nonouchi, director general of MITI's Basic Industries Bureau, told a Tokyo press conference last week that this process could take up to two months. He also indicated that company-by-company shares will be based in part on average 1980-84 exports to the United States.

Susan MacKnight

Corrections

JEI Report No. 9A, March 8, 1985 incorrectly stated the inducement effects component of Japan's total new materials market (see Figure 2). The figure should be Y11.2 trillion, bringing the total to Y63 trillion as reported in the text.

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The views expressed in this report are those of the authors and do not necessarily represent those of the Japan Economic Institute.

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INTEGRATION OF DOMESTIC AND INTERNATIONAL FINANCIAL MARKETS: THE JAPANESE EXPERIENCE

PART II OF A STUDY BY SENA EKEN OF THE INTERNATIONAL MONETARY FUND*

Impact of Integration of Financial Markets

The structure and operation of the Japanese financial system has changed significantly since the early 1970s. New markets and a wide array of instruments have been created, and transactions in existing markets have been decontrolled substantially. Services provided by banks and securities houses at home and abroad have expanded. Controls on financial transactions abroad by Japanese residents, as well as those in Japanese financial markets by foreigners, have been liberalized or, in many cases, abolished. An assessment of these developments requires an analysis of the impact of the integration of financial markets on the internationalization of the yen, on Japan's role as a major capital center, and on the exchange rate of the yen.

Internationalization of the Yen - The internationalization of a currency is measured by the extent of its use: as a transaction currency or unit of account in international trade; as an investment currency by nonresidents; and as a reserve currency by foreign monetary authorities. Although the role of the yen has increased on all accounts in the past few years, its growth has not been wholly commensurate with the development of Japan as a global economic power.

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The Japanese yen plays a comparatively minor role as a *transaction currency*. Its use is generally limited to Japanese foreign trade, and it does not serve as a transaction currency in trade between third countries. In the early 1970s, about 2 percent of Japanese exports were denominated in yen. A decade later, this ratio had increased to about 35 percent,[32] but remained considerably smaller than the corresponding figures for the United States (90 percent) and major European countries (60-85 percent). The role of the yen in Japanese imports has remained negligible at about 3 percent, compared with the use of domestic currencies of about 70 percent for the United States and a range of 30-45 percent for the major European countries.

The limited use of the yen in trade transactions is associated with various factors. In the past, quantitative controls on bank lending may have encouraged trade financing abroad in foreign currencies. The lack in earlier years of forward yen markets, where Japanese goods were exported, made it difficult to hedge the exchange risk if the exports were denominated in yen.[33] In fact, among major export markets, yen invoicing is most used for exports to European countries, where the yen forward market is well developed. While the ratio of yen-based contracts for sales to the United States is below 20 percent, that for shipments to Europe is 60 percent.[34] A large proportion of Japanese imports is accounted for by energy, agricultural products, and raw materials, prices for most of which are determined or fixed in U.S. dollars and settled in the currency in which the price is set. In addition, the domestic market prices of these goods are fairly sensitive to exchange rate changes, so that a part of the importer's risk is automatically hedged. Without a local bankers' acceptance market, Japanese traders continue to depend on the U.S. dollar acceptance market in New York.[35]

To the extent that liberalization of capital controls and integration of domestic and foreign capital markets increase access to yen financing, enhance the growth of the Euro-yen market, promote diversification of domestic financial instruments, and deepen the market for yen-denominated assets, the role of the yen as a transaction currency is likely to continue to expand. The Japanese authorities' desire to enhance the role of the yen is evidenced by the recently initiated study on the establishment of a bankers' acceptance market. However, the denomination of trade cannot be determined unilaterally, and progress may therefore be gradual.

[32] In the first quarter of 1983, the ratio of yen-based contracts to all of Japan's exports exceeded 40 percent for the first time.

[33] See H. Taguchi, "A Survey of International Use of the Yen," Bank for International Settlements, Working Paper No. 6 (Basel, July 1982).

[34] *Japan Economic Journal*, March 29, 1983.

[35] See Eric Hayden, "Internationalizing Japan's Financial System," in *Japan's Economy: Coping with Change in the International Environment*, ed. by Daniel I. Okimoto (Boulder, Colorado: Westview Press, 1982); and Morgan Guaranty Trust Company of New York, "Japanese Exchange Control Liberalization and the Yen," *World Finance Markets* (New York, March 1981), pp. 5-11.

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The liberalization of exchange controls and the increased availability of investment opportunities in yen assets have had a large impact on the role of the yen as an investment currency. Yen assets held by foreigners include yen deposits in Japan and the Euromarket and investments in yen-denominated securities and Japanese stocks. While complete data are not available on the amount of yen assets held by foreigners, the importance of the yen as an investment currency has been growing.

Yen deposits of nonresidents in Japan increased from $0.5 billion at the end of 1970 to $14.1 billion at the end of 1982 (Table 11). The pace of the increase was not steady in the 1970s, but since 1979 the expansion has been relatively stable, partly reflecting the lifting of interest rate controls on deposits of foreign public institutions. The growth of Euro-yen deposits has been even more rapid. Euro-yen deposits, which amounted to $1.7 billion at the end of 1977, about half the level of foreign yen deposits in Japan, reached $15.7 billion at the end of 1982,[36] or 1.1 times foreign yen deposits in Japan. If past trends in the growth of yen deposits in Japan and in the Euromarket continue, yen deposits held outside Japan could substantially exceed those held in Japan. These trends will depend on policies adopted for encouraging foreign yen deposit accounts in Japan by eliminating residual interest rate regulations.

Outstanding nonresident claims resulting from investments in yen-denominated securities have also increased sharply. Precise data on these are not available, but the increase in total Japanese securities held by nonresidents -- including those issued by Japanese entities in foreign markets in those markets' currencies -- from $2.7 billion at the end of 1970 to $42.6 billion at the end of 1980 and $71.5 billion at the end of 1982, provides strong evidence, as an estimated 80 percent represents investments in yen-denominated securities.[37]

Further evidence of the growing role of the yen as an investment currency can be found in the currency denomination of international bond issues (Table 12). The share of yen-denominated bonds averaged 6 percent in 1981-82, compared with about 61 percent for U.S. dollar-denominated bonds and 17 percent for Swiss franc-denominated bonds. While a movement toward denominating Eurobonds in Japanese yen has been observed in recent years, the share of Japanese yen in total Eurobond issues and placements remain relatively small, amounting to less than 2 percent.

The liberalization of capital flows and the trend toward domestic money market liberalization have also increased the role of the yen as a reserve currency. One indication of this increased use of the yen is the growth of yen

[36] Compared to $1,020 billion of total deposits in the narrowly defined Euromarket at the end of 1982, Euro-yen deposits were relatively small, but it is estimated that yen-denominated deposits in all institutions outside Japan, including, for example, those in Hong Kong and Singapore, amount to about $50 billion (*Japan Economic Journal*, January 17, 1984).

[37] See Michiya Matsukawa, "The Yen -- A Newly Emerging Reserve Currency," in *Reserve Currencies in Transition* (New York: Group of Thirty, 1982), pp. 24-31.

TABLE 11. YEN DEPOSITS OF NONRESIDENTS IN JAPAN AND IN THE EUROMARKET, 1970–82

(In billions of U.S. dollars)

End of Year	In Japan[1]	In Euromarket[2]			
		Monetary authorities	Banks	Non-banks	Total
1970	0.54	...	...	...	...
1971	0.94	...	...	...	...
1972	0.90	...	...	...	...
1973	0.63	...	...	...	...
1974	0.86	...	...	...	...
1975	1.47	...	...	...	...
1976	1.78	...	...	...	...
1977	3.20	—	1.4	0.3	1.7
1978	7.23	—	4.6	0.8	5.4
1979	4.44	—	5.2	1.1	6.3
1980	10.13	—	8.4	2.2	10.6
1981	13.56	0.1	12.5	3.8	16.3
1982	14.08	0.1	11.9	3.8	15.7

Sources: Bank of Japan, *Economic Statistics Annual* (Tokyo, 1982); and Bank for International Settlements (BIS), Monetary and Economic Department, *International Banking Developments* (Basle), various issues.

[1] Short-term external liabilities of authorized foreign exchange banks denominated in yen.

[2] Yen-denominated liabilities of banks in the BIS reporting area. No data are reported prior to 1977.

TABLE 12. CURRENCY DENOMINATION OF INTERNATIONAL BOND ISSUES, 1976–82

(In percent)

	1976	1977	1978	1979	1980	1981	1982
Japanese yen							
Total international	0.8	3.9	12.7	7.8	5.6	6.6	5.4
Eurobonds	—	0.6	0.5	0.9	1.5	1.6	1.3
Deutsche mark							
Total international	12.0	18.6	21.9	20.1	22.1	5.3	7.5
Eurobonds	18.4	26.8	41.1	30.1	17.2	5.2	7.0
Pound Sterling							
Total international	—	0.6	0.9	0.7	3.0	3.0	2.7
Eurobonds	—	1.1	1.8	1.5	4.9	2.0	1.7
Swiss franc							
Total international	15.9	13.7	20.2	23.7	19.7	17.0	16.0
Eurobonds	...	...	...	...	...	...	...
U.S. dollar							
Total international	60.1	55.5	37.4	38.6	42.2	60.4	62.4
Eurobonds	65.1	63.3	48.1	56.8	66.4	80.2	83.3

Sources: International Bank for Reconstruction and Development, *Borrowing in International Capital Markets* (Washington), various issues; and Organization for Economic Cooperation and Development, *Financial Statistics Monthly* (Paris), various issues.

assets of foreign monetary authorities in Japan. In addition, there are yen reserves invested outside Japan. It is estimated that, at the end of 1982, the total amount of yen held as a reserve currency was about SDR 9.2 billion -- $10.15 billion[38] -- compared with SDR 0.673 billion -- $0.79 billion -- at the end of 1975.

Concurrently, the share of the yen in official holdings of foreign exchange also increased (Table 13). The share of the yen in the SDR value of foreign exchange reserves increased continuously, from 0.5 percent at the end of 1975 to 3.9 percent in 1982, despite fluctuations in the value of the yen. However, compared with shares of the U.S. dollar and the deutsche mark, which amounted to about 71 percent and 12 percent, respectively, in 1982, the yen's role remains relatively small. The importance of the yen as a reserve currency among developing countries has been greater than among industrial countries. This partly reflects the attempts made by members of the Organization of Petroleum Exporting Countries, which are classified as developing countries, to diversify their foreign exchange holdings.

The composition of foreign exchange reserves in individual countries depends on various factors, including historical ties, regional financial and trade agreements, the type of exchange arrangement, the currency composition of external payments (especially related to trade and debt), and, to some extent, profit and risk considerations. Even though the role of the yen remains small as a reserve currency in the portfolios of central banks, it is likely to make headway in the future if viewed in the context of the above factors. With the liberalization of restrictions on yen lending, the volume of yen debt will be increasing, and, with the liberalization of short-term Euro-yen lending and the growth of the Euro-yen market, the role of the yen in trade transactions is likely to expand. As the availability and variety of yen-denominated instruments with competitive yields increase, monetary authorities will be further encouraged to diversify into yen.

Japan's Role as a Major Capital Center - As described in previous sections, Japan's capital markets expanded rapidly during the past decade, developing into a major source of funds for public and private borrowers and providing investors with a wide range of assets. As a result, Japan's capital market has evolved into one of the world's largest. The growth of domestic markets, together with the liberalization of foreign exchange controls, has also enhanced the role of Japan's capital markets in international financing.

In terms of gross bond issues, Japan is the second largest (excluding the Euromarket) in the world, after the United States (Table 14). In 1982, the value of bond issues in Japan amounted to about $177 billion, less than half the value of issues in the United States, but far greater than the amount recorded in any other market. Of the total bond issues in Japan, $3.3 billion (1.9 percent) were issued by foreigners.

The currency composition of foreign bonds reflects, in part, the expectations of borrowers and lenders regarding movements in interest rates,

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[38] International Monetary Fund, Annual Report (Washington, 1983), p. 71.

TABLE 13. SHARE OF NATIONAL CURRENCIES IN SDR VALUE OF TOTAL IDENTIFIED OFFICIAL HOLDINGS OF FOREIGN EXCHANGE, 1975–82

(In percent)

End of Year	Japanese Yen			U.S. Dollar	Deutsche Mark	Swiss Franc	Pound Sterling	French Franc
	Industrial countries	Developing countries	All countries					
1975	0.2	0.9	0.5	79.4	6.3	1.6	3.9	1.2
1976	0.4	1.1	0.8	79.7	7.0	1.4	2.0	0.9
1977	0.3	2.1	1.2	79.4	8.2	2.0	1.6	1.0
1978	1.6	4.0	2.5	76.9	9.9	1.4	1.5	0.9
1979	2.0	4.0	2.9	73.7	11.5	2.2	1.9	0.9
1980	2.8	4.3	3.5	68.7	13.8	3.1	2.9	1.2
1981	3.2	4.5	3.8	71.1	12.3	2.9	2.2	1.1
1982	3.9	4.0	3.9	71.4	11.6	2.7	2.2	1.1

Source: International Monetary Fund, *Annual Report of the Executive Board for the Financial Year Ended April 30, 19—* (Washington), various issues.

inflation, and exchange rates. Prevailing expectations, as well as the liberalization of regulations regarding foreign bond issues, made Japan an important market for foreign bond issues. Japan accounted for about 13 percent of foreign bond issues and placements in 1982, the third largest market country, with Switzerland accounting for 45 percent and the United States for 24 percent.[39]

What seems striking is the pace at which Japan has become a major market for foreign bond issues. As recently as 1976, foreign issues accounted for 0.3 percent of total issues in Japan. Since then, this ratio has increased steadily, amounting to almost 2 percent in 1982, about the same as in the United States. In the same period, Japan's share in total foreign bond issues increased from less than 2 percent to over 13 percent, while that of the United States showed a declining trend.

Japan's stock markets have also grown rapidly in the past decade. In terms of gross share issues, Japan is the second largest among industrial countries after the United States. Similarly, the Tokyo Stock Exchange is the second largest in the world, ranking after the New York Stock Exchange (Table 15). The market value of listed stocks on the Tokyo Stock Exchange totaled $417.9 billion at the end of 1981, less than half that of the New York Stock Exchange, but more than twice that of the London Stock Exchange and seven times that of the Frankfurt Stock Exchange. The transaction value of stocks on the Tokyo market in 1981 was $224.5 billion, about two thirds that transacted on the New York Exchange, but much greater than the values recorded in other markets.

The number of domestic companies listed on the Tokyo Stock Exchange in 1981 was 1,412, against 2,403 in London and 1,523 in New York. However, only 15 foreign companies were listed, compared with 478 in London and 177 in Frankfurt. The first equity issues by a foreign company in Tokyo were in 1973, and, by the end of 1976, 17 foreign companies had been listed. Since then, however, some companies have delisted their shares and others are reportedly considering delisting. The relatively small number of foreign companies listed on the Tokyo Exchange may result from various factors, such as the cost of keeping shares listed, the three-month deadline date for submission of financial reports,[40] and the lack of interest on the part of Japanese investors in locally listed foreign shares because of higher trading commissions for these shares and tax advantages on dividend payments for holders of Japanese shares.[41]

[39] Japan's share in foreign bond issues increased to 14.3 percent in 1983.

[40] Japanese firms are required to submit their financial reports within three months after closing their accounting year, whereas many European countries allow six months for submission of reports.

[41] Except for the withholding tax, dividends of less than Y100,000 a share a year on Japanese stocks are exempt from taxes, but such a system does not apply to foreign stocks.

TABLE 14. SECURITIES ISSUES IN MAJOR CAPITAL MARKETS, 1976–82

	1976	1977	1980	1981	1982
Gross bond issues					
	(In millions of U.S. dollars)				
Japan					
Total	84,930	105,613	161,330	181,337	176,997
Of which: Foreign	*287*	*1,394*	*1,543*	*2,723*	*3,301*
Germany, Fed. Rep. of					
Total	29,819	35,694	78,645	82,603	88,085
Of which: Foreign	*1,309*	*1,511*	*4,952*	*1,190*	*2,109*
Switzerland					
Total	9,513	7,818	13,194	12,414	16,929
Of which: Foreign	*5,444*	*4,959*	*7,470*	*8,118*	*11,325*
United Kingdom					
Total	17,307	24,582	37,579	28,705	21,948
Of which: Foreign	—	—	*178*	*913*	*1,129*
United States					
Total	194,500	201,400	272,400	291,600	378,300
Of which: Foreign	*10,632*	*7,668*	*2,736*	*7,576*	*6,025*
Gross share issues					
Japan	3,706	5,046	6,757	10,846	8,645
Germany, Fed. Rep. of	2,415	1,881	3,822	2,441	2,440
United Kingdom	1,907	1,377	2,222	3,831	1,899
United States	11,100	11,400	22,600	26,900	28,900
Foreign bond issues and placements by market		*(In percent of world total)*			
Japan	1.5	8.4	8.6	12.8	13.1
Germany, Fed. Rep. of	6.9	9.1	27.6	5.6	8.4
Switzerland	28.7	29.9	41.6	38.2	45.0
United Kingdom	—	—	1.0	4.3	4.5
United States	56.1	46.2	15.2	35.6	24.0

Sources: Organization for Economic Cooperation and Development, *Financial Statistics Monthly* (Paris), various issues; and International Bank for Reconstruction and Development, *Borrowing in International Capital Markets* (Washington), various issues.

TABLE 15. STOCK EXCHANGES, 1981

	Tokyo	Frankfurt	London	New York
Number of listed companies				
Domestic	1,412	198	2,403	1,523
Foreign	15	177	478	42
	(In millions of U.S. dollars)			
Market value of stocks at end of year	417,945	55,792	189,560	1,098,561
Transaction volume of stocks during year	224,516	7,047	30,896	389,219

Source: Nomura Securities, *Manual of Securities Statistics* (Tokyo, 1983).

Yen Exchange Rate - To moderate the fluctuations of the yen exchange rate following the adoption of the flexible exchange rate system, the Japanese Government has sometimes resorted to capital controls along with other policy measures. It is difficult to identify exactly when the modification of the system led to the tightening or relaxation of controls, because of the complexity of the measures taken and the different time periods in which they were implemented. In a broad sense, the modification of the system was such that, from mid-1978 to early 1979, measures were implemented to discourage net inflows of capital, and, from early 1979 to late 1980, measures were implemented to discourage net outflows of capital. Since the end of 1980, with the new Foreign Exchange and Trade Control Law, the principle of free capital transactions has been in effect, although implementing regulations contain administrative guidelines and reporting requirements.

A statistical analysis was performed to examine whether these capital control measures had an impact on the yen exchange rate. The explanatory equation used is based on the view that, in the long run, exchange rates tend to move in order to maintain purchasing power parity between currencies. However, in the short run, conditions in asset markets tend to dominate exchange rate movements, since capital flows can respond faster than the flow of goods to perceived changes in conditions. The primary influences in asset markets come from changes in interest rate differentials and in expected movements of the exchange rate. While exchange rate expectations are not observable, current account developments, which indicate the need for exchange rate adjustments to alter competitiveness, tend to affect exchange rate expectations.

The estimated exchange rate equation relates the real U.S. dollar/yen exchange rate (E) to the real short-term interest differential between the United States and Japan (RUS-RJ), lagged unexpected developments in the Japanese and U.S. current account balances (DCA), and the last period's value of the real exchange rate (E^{t-1}). To measure the impact of capital controls on the exchange rate, a dummy variable (D) representing controls was introduced into the equation. The dummy variable was specified as minus one when the controls were in the direction of discouraging capital inflows and encouraging capital outflows, as one when the controls were in the direction of discouraging outflows and encouraging capital inflows, and zero when there were no controls. The equations were estimated using data from the last quarter of 1978 through the first quarter of 1983.[42]

[42] The variables are defined as follows: the real exchange rate is an index of the nominal exchange rate (U.S. dollar/yen) multiplied by the ratio of the consumer price index in Japan to that in the United States. The real interest rate at time t is calculated as the nominal interest rate at time t less the percentage change in a six-month centered moving average of the consumer price index between t and t-6 expressed at an annual rate. The nominal interest rate used for Japan is the three-month Gensaki rate and that for the United States is the three-month treasury bill rate. The variable DCA represents cumulated unexpected changes in the difference between the Japanese and U.S. current account balances. The expected difference between these balances is estimated by regressing the actual difference on its lagged values and on lagged values of the real exchange rate. The variable DCA is the

$$\ln(E) = \underset{(1.88)}{0.8870} - \underset{(-3.30)}{0.0163}\,(RUS-RJ) + \underset{(2.13)}{0.0121}\,DCA(t-1) + \underset{(8.03)}{0.7874}\,(RUS-RJ)_{t-1}$$

$$+\underset{(8.03)}{0.7874}\,\ln(E)(t-1)$$

$$\overline{R}^2 = 0.879 \qquad H = 1.628 \qquad SEE = 0.051$$

$$\ln(E) = \underset{(0.07)}{0.0404} - \underset{(-2.40)}{0.0117}\,(RUS-RJ) + \underset{(3.20)}{0.0235}\,DCA(t-1) + \underset{(8.30)}{0.9433}\,(RUS-RJ)_{t-1}$$

$$+\underset{(8.30)}{0.9433}\,\ln(E)(t-1) + \underset{(2.15)}{0.612}\,D$$

$$\overline{R}^2 = 0.910 \qquad H = 1.155 \qquad SEE = 0.045$$

As can be seen, when the dummy variable was introduced to represent controls, the sign of the dummy variable was consistent with prior expectations. Controls aimed at discouraging inflows and encouraging outflows contributed to a weaker yen. Conversely, controls aimed at encouraging inflows and discouraging outflows contributed to a stronger yen.[43] The introduction of the dummy variable is also seen to improve, although marginally, the overall goodness of fit of the equation. Therefore, the nature of the capital controls introduced and modified by the Japanese Government was consistent with its exchange rate objectives.

As the Japanese and international capital markets became better integrated with the lifting of capital controls, the impact of this development on the volatility of the yen exchange rate became a matter of debate. Basically, there are two opposing hypotheses. The first is that large swings in the exchange rate are the result of momentum or bandwagon effects and that the liberalization of exchange controls -- by making it easier to shift in and out of yen and by increasing the sensitivity of capital flows to changes in interest rate differentials and exchange rate expectations -- will likely exacerbate this tendency. Thus, it is held that liberalization of exchange

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cumulated divergence of the actual from the expected difference between the Japanese and U.S. current account balances; that is, $DCA = \Sigma(DCAS)$, where $DCAS = DCA^e - DCAB$ (DCA^e = expected divergence between the Japanese and U.S. current account balances and DCAB = actual divergence between the Japanese and U.S. current account balances). The variable is lagged because it is assumed that market participants receive the data with a one-period lag. The coefficient on the lagged real interest differential was constrained to be equivalent to that on the lagged real exchange rate in an effort to avoid multicollinearity. The numbers in parentheses are t-statistics.

[43] These results are consistent with those obtained by Ichiro Otani ["Exchange Rate Instability and Capital Controls: The Japanese Experience, 1978-81," in Exchange Rate and Trade Instability: Causes, Consequences, and Remedies, ed. by David Bigman and Teizo Taya (Cambridge, Massachusetts: Ballinger Publishing Co., 1983), pp. 311-337], where he analyzed the impact of capital controls on exchange rates through their impact on transaction costs, the domestic interest rate, and the forward premium.

controls creates the potential for more volatility. The second hypothesis is that, although the imposition of controls on net inflows at times of strong current account positions and a strong yen, and on net outflows at times of current account deficits and a weak yen, was successful in limiting certain capital flows, these controls contributed to thin markets. The liberalization of exchange controls would lead to a deepening of the market for yen assets, and sharp exchange rate fluctuations resulting from a thin market would thus be avoided. There is some logic in both of these hypotheses, and it is not possible to predict a priori whether or not the liberalization of capital controls would lead to greater exchange rate variability.

Inasmuch as capital flows into and out of Japan are free of formal restrictions and administrative guidelines biased toward either capital inflows or outflows, and financial markets in Japan function efficiently, there can be increased confidence that over the longer term the exchange rate would move to reflect economic fundamentals such as changes in purchasing power parity and current account developments.

Summary and Conclusions

The Japanese financial system has undergone far-reaching changes in the past decade. The highly regulated system of the 1960s, dependent on bank lending with controls on interest rates and the quantity and distribution of credit and highly specialized financial institutions, has evolved into one in which market forces of both domestic and foreign origin play a major role.

Large-scale issues of government bonds after 1975 resulted in a rapid growth of Japan's primary and secondary financial markets and necessitated changes in issuing practices. To facilitate new issues, the government began issuing medium-term bonds through the open bidding system, the time period that the banks were required to hold new issues was reduced, and the new bonds were increasingly issued at rates reflecting those in the secondary market.

Extensive reforms also took place in short-term financial markets. These markets expanded substantially with the creation of the bill discount and certificate of deposit markets. Official controls on both the bill discount and call markets were removed, although the Bank of Japan continues to intervene in both markets. Restrictions on banks' participation in the Gensaki market were removed, facilitating the integration of interbank markets with unregulated markets, and thus enabling greater interest rate arbitrage across markets. These reforms in the money markets and the development of the government bond market altered the transmission mechanism of monetary policy.

The development of financial markets, while official regulations on deposit rates have remained in effect, has reduced the relative importance of commercial banks in financial intermediation. To enable banks to adjust to the changing financial environment, the Government authorized them to issue certificates of deposit, subject to certain restrictions. Also, in an effort to compete for funds, commercial banks have introduced various instruments with higher yields than those on regular bank deposits.

Largely to facilitate the issuance of government bonds, compartmentalization of the roles of financial institutions has been introduced. The Banking Law of 1982 authorized banks to purchase, sell, and underwrite government securities. Initially, the banks sold new issues of long-term government bonds and, subsequently, new issues of medium-term and discount bonds. Effective April 1, 1984, both banks and securities firms were allowed to deal in certificates of deposit and commercial paper issued abroad and denominated in foreign currencies, and, since June 1984, banks have also dealt in domestic bonds in the secondary market. Securities companies, on the other hand, may now sell investment trusts, which are highly liquid and similar to bank deposits, and may engage in lending with government bonds as collateral. The sale of new issues of government bonds by banks has led to increased purchases of newly issued bonds by individuals and is serving as a stabilizing factor in the government bond market.

These developments in domestic financial markets, by providing investors with a wider array of assets with market-determined interest rates, together with the liberalization of capital flows in and out of Japan, have increased the integration of the Japanese financial system with that of the rest of the world. Particularly important in the integration of Japanese money markets with those abroad was the removal of barriers to foreign participation in the Gensaki and certificate of deposit markets. Permission for new equity issues by foreign companies in the Japanese stock market, as well as the issuance of foreign yen bonds in Japan, has increased foreign access to Japanese capital markets, although at times access has been temporarily limited because of developments in the balance of payments and exchange rate. Although initially the foreign yen bond market was dominated by international organizations and sovereign borrowers, the relaxation of eligibility criteria and changes in issuing procedures broadened the range of potential participants. Moreover, the scope for foreign equity investment in Japan was widened with the lifting of the limitation on foreign ownership except for designated companies.

Japanese access to markets abroad also increased substantially, as Japanese corporations were given greater freedom to borrow in capital markets abroad and institutions were allowed to invest their surplus funds abroad. These changes significantly affected corporate finance and led to substantial portfolio diversification by institutional investors.

Official controls on lending abroad by Japanese banks were recently eliminated, though such lending remains subject to prudential guidelines, as it is in other countries, and the access of foreign banks to Japan's financial markets was enhanced. Particularly important to the foreign banks were their increased sources of yen funding following the authority given to them to issue certificates of deposit and their access to the Bank of Japan's discount window. Although bond issues by banks in Japan are not allowed, subsidiaries of Japanese banks are allowed to issue bonds abroad and remit funds to Japan for lending operations of parent banks. Furthermore, short-term Euro-yen lending by Japanese banks was completely liberalized. In the foreign exchange market, the requirement of underlying trade or securities transactions for forward exchange transactions by residents was eliminated, Japanese residents were given unlimited freedom to exchange yen into foreign currencies for deposit with Japanese banks, and the limits on the foreign-currency swaps that both Japanese and foreign banks could undertake were increased.

As a result of the fundamental strength of the Japanese economy and the removal of formal restrictions on international movements of funds, capital flows into and out of Japan have increased dramatically. Outflows of Japanese capital, which averaged $5.1 billion a year during 1973-77, increased to an average of $18.4 billion a year during 1978-82, and reached $32.5 billion in 1983. During the corresponding periods, net inflows of long-term foreign capital averaged $1.5 billion, $8.9 billion, and $14.8 billion, respectively. These changes have made Japan's capital market the world's second largest, excluding the Euromarket. Furthermore, the yen's role as an international currency has increased substantially during the past decade.

The liberalization of capital flows has also increased the role of market forces of international origin in the Japanese financial system. In the past, there was heavy reliance on capital controls and exchange market intervention as instruments of exchange rate management. Without capital controls and with the growing size of the exchange market, greater interest rate flexibility in the management of the exchange rate became necessary. The integration of domestic and international financial markets has thus added momentum to the movement toward interest rate liberalization and the associated diversification of financial instruments in the domestic market.

Market forces will continue to exert strong pressures for further progress in capital markets and interest rate liberalization. The most important pressure is likely to come from the completion of the maturity structure in the secondary market for government bonds, with the large-scale maturing of long-term government debt due to begin in 1985. The increase in government bonds with short remaining maturities could cause substantial disintermediation if deposit rates remain subject to controls. Also, refinancing needs are likely to lead to a wider array of maturities for new government bonds, and could necessitate changes in marketing mechanisms to facilitate these issues. One of the institutional constraints on the liberalization of deposit rates has been the postal savings system, an important source of financing for the Government's Fiscal Investment and Loan Program. Thus, although the liberalization of deposit rates is inevitable, the process is likely to be gradual, starting with the liberalization of rates on large deposits held primarily by institutional investors.

Efforts are continuing to enhance Japan's role as a major capital center and to promote further internationalization of the yen by providing a wider array of yen assets and developing a full-fledged Euro-yen market. Consideration is also being given to the establishment of a bankers' acceptance market in yen. These measures are consistent with forces for further liberalization of domestic financial markets and are likely to enhance their efficiency, as well as their integration with markets abroad.

* * * * * *

Part I of this study was published as JEI Report No. 11A, March 22, 1985.

APPENDIX

Table 16: Summary of Bond Issues in Japan

	Maturity (Years)	Method of Issue	Other Requirements
Government bonds			
Long-term	10	Underwritten by a syndicate consisting of major financial institutions and securities houses; these institutions take the portions they have underwritten.[1]	Issued through a fixed-calendar issue system.
Discount	5		
Medium-term	2-4	Competitive auction system whereby investors purchase the securities directly.	
Government-guaranteed bonds	10	Underwritten by a syndicate of banks and securities houses with a bank acting as a commissioned bank.	The amount of bond issues by public corporations is determined every year by the Ministry of Finance.
Local government bonds	10	Public offerings are underwritten by a syndicate of banks and securities houses with a bank acting as a commissioned bank. Local government bonds are usually privately placed by the issuer to city banks, regional banks, and local financial institutions.	
Bank debentures with semiannual interest payment	3, 5	Issued directly by six banks. Certain amount sold directly by banks and the remainder through securities houses.	(1) Range in maturities from 1-5 years; (2) Ceilings on issue amounts are set by the Ministry of Finance based on a multiple of banks' capital and reserves.
Discount debentures	1		

Table 17: Summary Characteristics of Japanese Short-Term Money Markets

	Call Market	Bill Discount Market	Certificate of Deposit Market	Gensaki Market
Nature of the market	Interbank	Interbank	Open market	Open market. Consists of a conditional purchase of a government or corporate bond for a fixed period with a resale agreement at a specific date.
Participants	Financial institutions. Six specialized money dealers act as middlemen.	Financial institutions. Six specialized money dealers act as middlemen.	All financial institutions can issue certificates of deposit.	Market is open to any institution but not to individuals. Major borrowers are securities companies and financial institutions, and major lenders are private corporations.

	Call Market	Bill Discount Market	Certificate of Deposit Market	Gensaki Market
Maturities of transactions	(1)Half-day, money payable within the day; (2)unconditional money repayable in the next business day; (3)fixed maturity, money repayable in 2-7 business days.	Bills are available in four maturities: 30-45 days, 46-75 days, 76-105 days, and 106-120 days.	Certificates of deposit are issued with maturities of 3-6 months.	Repurchase agreements with maturities of 1-364 days are available.
Amounts of transactions	Minimum transaction amount is Y100 million.	Minimum transaction amount is Y10 million	Minimum denominations of Y300 million.[2]	Minimum trading amount is Y100 million.
Interest rates	Posted rates have been removed. The Bank of Japan has a major influence on the call money rates.	Posted rates have been removed. The Bank of Japan has a major influence on the call money rate.	Freely determined.	Freely determined. The differential between the purchase and resale prices reflects the cost of funds or the yield to the investor.
Taxation			Final holders of certificates of deposit are subject to 20 percent withholding tax at maturity. Foreign governments are exempt from the withholding tax. No transactions tax in secondary trading.	Investors in Gensaki market are subject to transations tax. Interest from Gensaki investments are not subject to withholding tax as securities houses remain the registered holders of bonds during the repurchase agreement.
Other requirements	Unconditional fixed maturity loans require collateral, such as government bonds, government-guaranteed bonds, or bank debentures of 100-125 percent of the transaction amount.	(1)Only short-term bills issued by the Bank of Japan and accommodations bills[3] are traded; (2)Investors are allowed to sell bills, except one-month bills, without restriction 30 days after they have been issued.	(1)Banks cannot buy back their own certificates of deposit before they mature; (2)Japanese banks can issue certificates of deposit up to 75 percent of their capital and reserves, and foreign banks in Japan up to 50 percent of their yen assets, subject to a limit of Y8 billion.[4]	Securities companies can sell bonds from their own inventories (a dealing transaction) or they act as intemediaries between two outside parties (a brokerage transaction). There are no commissions on the former; securities companies earn a spread between the bid and offer yields on the latter (they earn about 0.5 percent or less, depending on the maturity).

[1] Since early 1983, banks have been allowed to make over-the-counter sales of new issues during the specified issue periods. New issues that are not sold to the public by the end of the issue period are taken into banks' own portfolios and must then be held for a minimum of 100 days before being traded.

[2] The minimum denomination was reduced from Y500 million to Y300 million, effective January 1984.

[3] When Japanese companies borrow money, they issue promissory notes to the banks. Banks in turn issue accommodation bills, to which they attach the promissory notes as collateral. The value of the accommodation bill equals the sum value of the promissory notes.

[4] The ratio for Japanese banks will be increased 5 percentage points each quarter, starting in April 1984, and will reach 100 percent after April 1985. The ratio for foreign banks was increased from 30 percent to 50 percent in April 1984.

Sources for Table 16: Stephen Bronte, Japanese Finance: Markets and Institutions (London: Euromoney Publications, 1982); and data provided by the Japanese Ministry of Finance.

Sources for Table 17: Stephen Bronte, Japanese Finance: Markets and Institutions (London: Euromoney Publications, 1982); and Eric Hayden, "Internationalizing Japan's Financial System," in Japan's Economy: Coping with Change in the International Environment, ed. by Daniel L. Okimoto (Boulder, Colorado: Westview Press, 1982).

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REPORT

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Brock Leaves USTR; Congress Continues Attack on Japan

United States Trade Representative William E. Brock has been nominated by President Reagan to succeed outgoing secretary Raymond Donovan as head of the Department of Labor. The timing of the appointment, however, risks derailing ongoing negotiations with Japan and losing some of the momentum that had been generated for a new round of international trade negotiations.

Mr. Brock accepted the nomination reluctantly. Observers suggest that the senior trade negotiator hoped to remain in his position at least until major trading nations agreed to an agenda for a new multilateral negotiating round and trade relations with Japan returned to a more satisfactory basis. However, his proven talents as a political operative -- he is given considerable credit for enhancing the image of the Republican Party among voters in 1980 -- were sought by the administration to establish ties with organized labor before the 1986 congressional elections. Domestic political overvalued, as ours is now," and concluded that these obstacles have cost the U.S. economy 400,000 jobs and $12 billion in American sales to Japan.

In a related development, the Congressional Budget Office (CBO) released on March 22 the first installment of a three-part study on the effects of an import surcharge on the U.S. economy. CBO concluded that a 20 percent duty across the board probably would invite immediate retaliation by American trading partners and produce significant negative effects on the domestic economy while having only a marginal impact on imports. Even assuming no foreign retaliation -- a shaky premise according to CBO unless U.S. trade partners perceived the extra tariff as truly short term and temporary -- a surcharge would strengthen the dollar, further complicating American sales efforts abroad. By shifting resources from efficient, export-oriented industries to less efficient, import-competing industries, prices in domestic markets would rise.

If a surcharge was truly temporary, CBO analysts argued, consumers would either delay purchases or simply pay higher prices for imported products. This would counteract the shift toward import-substitution industries. Furthermore, with the dollar soaring on international markets, overseas producers could easily absorb the surcharge. "The most likely outcome," the report concluded, "is that almost everyone would be worse off."

CBO supplied little numerical data in this initial survey, providing a qualitative rather than quantitative assessment of the possible impact of an import surcharge. Employment effects, for example, were not substantiated to any great degree. More detailed examinations of the surcharge issue by the CBO, in addition to an independent assessment by the Congressional Research Service, are expected in the next four to eight weeks.

Michael Chinworth

Japan's GNP Rebounds in Fourth Quarter

The Japanese economy came roaring back in the last three months of 1984, chalking up its biggest quarterly real (inflation-adjusted) gain of the year. Led by continued strong foreign trade growth, all of the non-governmental components of gross national product (GNP) moved ahead in 1984's final quarter (see table for details), pushing the economy to its best annual performance since 1973. Although the solid showing relieved many observers concerned by an abrupt third-quarter slowdown, the economy remains vulnerable because of its high reliance on foreign trade.

The net external sector's impressive quarterly gain resulted from a resurgence of exports combined with a decline in imports. Japanese observers have attributed the erratic behavior of imports over the last three quarters to heavy July-September purchases of crude oil that fueled the 32 percent quarterly jump, leading to an 18 percent final-quarter drop in imports. According to Finance Ministry trade statistics, however, the volume of oil imports varied only slightly during the last three quarters of 1984, casting doubt on the oil import explanation. Strong consumer demand in the United States probably made a large contribution to the export rebound, although economic improvements in European countries certainly played a role.

Japan's Real Gross National Product at Constant (1975) Prices

(in billions of yen, seasonally adjusted, quarterly totals and rates of growth at annual rates)

	1983	1984	January-March 1984	April-June 1984	July-September 1984	October-December 1984
Gross National Product	Y210,903.5 (3.4%)	Y223,050.6 (5.8%)	Y217,927.5 (5.9%)	Y221,934.9 (7.6%)	Y223,366.6 (2.6%)	Y228,540.9 (9.6%)
Personal Consumption Spending	110,702.4 (3.4%)	113,708.4 (2.7%)	112,899.1 (3.7%)	113,323.8 (1.5%)	114,054.3 (2.6%)	114,354.5 (1.1%)
Private Residential Construction	10,060.0 (-5.9%)	9,982.6 (-0.8%)	9,958.3 (-6.0%)	9,826.1 (-5.4%)	9,965.3 (5.8%)	10,198.7 (9.7%)
Private Fixed Nonresidential Investment	36,366.0 (3.4%)	40,392.7 (11.1%)	38,716.6 (12.0%)	39,678.7 (10.3%)	40,658.3 (10.2%)	42,343.3 (17.6%)
Change in Business Inventories	869.4 (-52.8%)	1,190.3 (36.9%)	834.6 (-276.1%)	1,155.2 (267.0%)	1,485.9 (173.7%)	1,282.2 (-80.4%)
Government Current Expenditures	19,728.6 (2.9%)	20,160.8 (2.2%)	19,991.6 (3.6%)	20,152.2 (3.3%)	20,270.8 (2.4%)	20,235.4 (-0.7%)
Government Fixed Investment	18,359.9 (-0.6%)	18,091.3 (-1.5%)	17,632.7 (-11.5%)	18,368.9 (17.8%)	18,504.7 (3.0%)	17,964.1 (-12.6%)
Change in Government Inventories	-320.2 (*)	92.7 (*)	-74.5 (*)	6.4 (*)	488.0 (*)	-47.5 (*)
Net External Sector	15,137.4 (26.6%)	19,431.8 (28.4%)	17,969.5 (47.9%)	19,423.6 (36.5%)	17,939.3 (-37.4%)	22,210.2 (135.0%)
Exports of Goods and Services and Factor Income Received	42,353.5 (4.7%)	50,037.6 (18.1%)	47,208.2 (19.6%)	49,462.1 (20.5%)	50,166.9 (5.8%)	53,141.9 (25.9%)
Imports of Goods and Services and Factor Income Paid	27,216.1 (-4.5%)	30,605.7 (12.5%)	29,238.7 (5.6%)	30,038.5 (11.4%)	32,227.6 (32.5%)	30,931.7 (-17.8%)

*Cannot be calculated or meaningless.

Source: Economic Planning Agency

Private domestic demand put in a better performance in the fourth quarter, led by strong private fixed investment and housing construction. The increase in homebuilding particularly pleased Japanese observers and almost erased the contractions in 1984's first two quarters. Although private plant and equipment investment moved up smartly, much of it remained linked to the export sector. And while personal consumption continued to rise, the low 1.1 percent showing was disappointing in light of the holiday buying season.

The public sector did not play a stimulative role in the last three months of 1984, reflecting the austere fiscal policies pursued by the Nakasone administration. The government's overall contribution to growth in 1984 was similarly non-stimulative. Growth of current expenditures was less than the previous year and fixed investment shrank at a more rapid pace.

The importance of foreign trade is evident from the figures for the whole of 1984, which show economic growth paced by exports and private nonresidential investment. The net external sector increased its share of GNP from 7.2 percent in 1983 to 8.7 percent. In the fourth quarter, foreign trade generated 83 percent of the quarterly growth. Nonetheless, domestic components accounted for 64 percent of the economy's annual growth last year, according to Japan's Economic Planning Agency (EPA).

EPA predicts that the economy will continue to grow in the first quarter of 1985, although at a slower rate. A reduction in the growth of private investment and exports will not prevent the economy from fulfilling the government's forecast 4.6 percent gain in real GNP for fiscal 1984 (ending March 31, 1985). There is some optimism on other fronts also. The upswing in housing construction should continue, despite recent signs that interest rates may rise. A gradual revival of personal consumption is predicted on the basis of a favorable outcome to the annual spring wage negotiations. In sum, the Japanese economy put in a stellar performance for 1984 and seems positioned for continued growth in 1985.

Jon Choy

Japan Moves on Protection of Software and Microchips

In another bid to reduce U.S.-Japan tensions, the Ministry of International Trade and Industry (MITI) and the Ministry of Education (MOE) have reached a compromise on legislation similar to the United States' to safeguard computer software programs. Japanese negotiators announced the decision at working-level talks on electronics trade held in Tokyo March 18 and 19. In addition, Tokyo's proposal to extend protection to microchip designs is also making progress. Washington welcomed the announcements, but trade officials remain cautious since the contents of the bills have not been finalized.

The question of how to safeguard the rights of software authors has been an issue in U.S.-Japan relations since December 9, 1983, when a MITI advisory council advocated a system significantly different from U.S. practice (see JEI Report No. 1B, January 6, 1984). In brief, the ministry's proposal would have established a new legal domain for software that gave the author the right to outcome of the critical telecommunications talks is not clear, any move to improve the atmosphere should help to defuse the situation.

Jon Choy

Sino-Japanese Trade Booms

Stepped-up two-way trade during 1984 solidified Japan's position as China's largest trading partner and pushed bilateral trade to record levels. Japanese imports from China increased by just over 17 percent, rising from $5.1 billion in 1983 to more than $5.9 billion last year, while exports rose nearly 50 percent, or from $4.9 billion to $7.2 billion. These increases mark the second consecutive annual expansion of bilateral trade.

Japan's sales to China were aided by boosts in machinery and equipment exports, which increased two and a half times. Exports of chemicals were also up, rising by nearly a fifth. Most export categories, in fact, experienced double-digit increases during the year. Textiles led gains on the import side, followed by agricultural and industrial raw materials (see tables accompanying this article for details).

* * *

Japan's Trade Balance With China
1979-1984

	Exports	Imports	Balance
1979	$3,698.7 (21.3%)	$2,954.8 (45.5%)	$743.9
1980	5,078.3 (37.3)	4,323.4 (46.3)	754.9
1981	5,095.5 (0.34)	5,291.8 (22.4)	-196.3
1982	3,510.8 (-31.1)	5,352.4 (1.1)	-1,841.6
1983	4,914.1 (40.0)	5,087.1 (-5.0)	-173.0
1984	7,216.7 (46.9)	5,957.6 (17.1)	1,259.1

* * *

Japan's trade with China boomed in the late 1970s, only to peak in 1981 at just over $10 billion. A precipitous decline occurred the next year because of China's cancellation of four major heavy industry projects, reflecting both the country's internal political turmoil and policy shifts to emphasize agricultural development. Sino-Japanese trade ties over the last two years, however, have been characterized by pragmatic considerations, resulting in increases in total bilateral trade of 12.8 percent in 1983 and 31.7 percent in 1984.

Trade patterns in 1983 and 1984 reflect the complementary nature of the two economies. Under previous regimes, the People's Republic may have been concerned about the rapid growth of Japanese exports to China, but it appears that the current leadership, while encouraging Japanese investment to modernize its resource industries and manufacturing capabilities, will not take steps to stem Japanese exports to the country. This generally positive atmosphere, characteristic of China's vow to restore a sense of capitalistic competition to the economy to enable it to play a larger global economic role, could help maintain the trend toward increasing two-way trade.

Japan's Trade with China, 1982-1984

(in millions of dollars; exports f.o.b., imports c.i.f.)

	1982	1983	1984
Total Exports	$3,510.8	$4,914.1	$7,216.7
Textiles	367.9 (-38.6)	286.3 (-22.2)	382.6 (33.6)
Chemicals	469.8 (-10.2)	509.9 (8.5)	610.2 (19.7)
Metals and Metal Products	1,354.3 (8.4)	2,432.8 (79.6)	2,842.8 (16.9)
Machinery and Transport Equipment	1,067.1 (-56.1)	843.5 (-21.8)	2,961.4 (251.1)
Total Imports	5,352.4 (1.1)	5,087.1 (-5.0)	5,957.6 (17.1)
Food	504.4 (-9.3)	522.6 (3.6)	849.0 (20.6)
Textile Materials	176.9 (9.1)	208.2 (17.7)	286.4 (37.6)
Mineral Fuels	3,061.4 (4.3)	2,778.6 (-9.2)	3,093.1 (11.3)
Textiles	572.8 (3.9)	621.5 (8.5)	888.0 (42.9)
Chemicals	230.1 (-5.9)	218.1 (-5.2)	231.2 (13.6)

Note: Figures in parenthesis indicate the percentage change from the previous year.

Source: Japan Tariff Association, Summary Report: Trade of Japan

One sore point with China -- Japanese investment -- has also changed significantly. Although still lagging behind the United States and Hong Kong in terms of numbers of investment projects, Japan's joint ventures in China rose from only 9 in 1983 to 23 by November 1984.

Last year's strong growth in bilateral trade, the prospect of continued political stability, and the likelihood of consistent trade policies in China have led a Japanese research institute to predict that exports to China will increase another 20 percent in 1985, coupled with a 10 percent growth in imports. Contributing to this optimistic outlook is the fact that Japan's exports to China accelerated in each quarter of 1984, beginning at $1.4 billion in the first quarter and rising to $2.5 billion-plus by the end of the year.

Michael Chinworth

Japan's Car Exports: The Guessing Game Continues

When President Reagan announced March 1 that he would not ask Tokyo to extend restraints on shipments of Japanese-made cars to the United States for a fifth year, he set the stage for a month-long guessing game in Washington and Detroit: how many additional cars will Japan's automotive manufacturers export to this country in the year starting April 1. Industry analysts, American car makers, union representatives, Reagan administration trade officials and congressional leaders have all mapped out different scenarios, but since most people assume that Japanese auto companies will tailor their U.S. sales strategies to minimize the chances of a protectionist backlash, there is something close to a consensus on the level of shipments in the April 1985-March 1986 period.

In this view, Japan's top three exporters can live with fairly modest increases in shipments. Their main goal, it is argued, is to have adequate inventories in the United States so that skimpy stocks will no longer cost them sales. Honda Motor Co., Ltd. has the most flexibility of this trio since 150,000 Accords a year are rolling out of its Marysville, Ohio plant. Nissan Motor Co., Ltd. will also gain a little maneuvering room as its factory in Smyrna, Tennessee phases in production of the Sentra from this week. The only way Toyota Motor Corp. can expand U.S. sales, however, is by upping exports because all of the output of New United Motor Manufacturing Inc. goes to its partner, General Motors Corp.

Mazda Motor Corp. and Fuji Heavy Industries, Ltd., the manufacturer of Subaru vehicles, are said to be eyeing slightly bigger increases than their larger competitors. They, too, have had to contend with the problem of short car supplies. Perhaps more importantly, both companies feel shortchanged by the quota allocation formula in effect for the past four years, which they maintain has bolstered the already strong U.S. sales position of Toyota, Nissan and Honda.

The wild cards in everyone's forecasts are the three Japanese auto companies that build cars for American makers. It is reported that General Motors wants to source 150,000 subcompacts from Isuzu Motors, Ltd. and 84,000 minicars from its other Japanese affiliate, Suzuki Motor Co., Ltd., over the next twelve months for sale under the Chrevolet nameplate -- a big jump from the present 30,000 Isuzu vehicles and 17,000 Suzuki-made cars but still short of GM's original import plans. For its part, Chrysler Corp. has placed a "firm order" for up to 200,000 more cars built by Mitsubishi Motors Corp., which in the year through March 1985 supplied 87,000 Dodge and Plymouth cars. The Japanese auto maker would also like to ship more cars to the United States for sale under its name, as would Isuzu, another relative newcomer to the American market.

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REPORT

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JAPAN AND LATIN AMERICA:
ECONOMIC AND POLITICAL RELATIONS

Summary

While still of secondary importance in the overall trade picture, Latin America* is assuming a larger role in Japan's economy, increasingly providing more of its natural resource needs and attracting investment in resource development and processing and manufacturing industries. Global recessions, regional political problems and economic instability over the last ten years have retarded the growth of broader relations, but sufficient momentum appears to have been established to overcome these setbacks.

Political relations, while not overly friendly, are cordial and reflect practical considerations over ideology. Japanese officials do not anticipate dramatic changes in relations with individual countries in the region, but do predict -- albeit guardedly -- an increasingly important role for Latin America in its future.

*Latin America in this report refers to all the countries south of the U.S. border, including Caribbean nations. Economic and political analyses of Latin America define the region in various ways. The Inter-American Development Bank, which Japan joined in 1976, includes countries such as the Dominican Republic and the Bahamas in its analyses. The Organization of American States, on the other hand, generally defines Latin America as its member states in that region.

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Latin America: The Economic Setting

Latin America's macroeconomic performance over the last several years has been less than encouraging in most instances. The gross domestic product (GDP) of the region fell in 1982, the latest year for which data are available for all countries, and per capita income was down for the second year in a row. As a result of the 1980-82 worldwide recession, many Latin American nations faced well-publicized difficulties. Economic data from several important nations reflect the nearly catastrophic conditions:

- Brazil - The economy grew by only 1 percent in 1982, primarily responding to gains in services and mining. This low growth rate is particularly important since Brazil is responsible for fully one-third of Latin America's gross domestic product. Construction and agricultural output increased only slightly, and manufacturing stagnated. Imports fell, as did investment.

- Mexico - Devaluation of the peso and the imposition of exchange controls followed worsening external disequilibrium and a drop in international reserves. Mexico experienced a 13 percent fall in public investment during 1982; private capital investment declined 30 percent.

- Argentina - Gross domestic product fell by 5.7 percent in 1982 after a decline of nearly 6 percent the previous year. Capital formation was down by 20 percent for the second consecutive year. Total consumption fell 3.5 percent in 1981 and almost 10 percent the following year.

- Venezuela - Unemployment rose for the fourth year in a row in 1982. Declining international oil prices in 1983 constrained the domestic economy and although a positive balance of payments was recorded, import and exchange controls had to be put in place to achieve it.

Conditions improved during 1983 in some sectors for many countries, but the picture since the recession has been mixed at best. As a group, Latin American nations saw their gross domestic product and per capita GDP fall in 1983 for the second year in a row, pulled down by declining final consumption and gross domestic investment. In addition, the region's external debt rose.

The Debt Crisis

The overriding international economic issue for Latin American countries is the funding of foreign debt -- the size of which had risen to about $336 billion by the end of 1983, four-and-a-half times 1975's level and 56 percent of the region's gross domestic product. Servicing that debt consumed 38 percent of foreign exchange receipts in 1983, in contrast with 13 percent in 1975.

Although Japanese banks have been able to avoid many of the problems facing U.S. financial institutions active in the area, Japan is the second-largest creditor in the region, providing about 15 percent of total Latin American loans -- more than $42 billion.

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Several factors have tempered Japanese private- and public-sector decisions regarding investment and trade. Among them is the policy adopted by many Latin American nations of expanding consumption and investment at the expense of domestic savings, and a lax governmental attitude toward debt obligations. International economic conditions contributed to the problems, particularly higher oil prices and the recessions of 1974-75 and 1980-82.

The economic situation in developed countries is particularly significant to those nations with the largest accumulated debts. Seventy-two percent of Latin America's commodity exports and 52 percent of its manufactured exports are bought by industrialized nations. The recession in the United States was particularly painful for Latin America. Protectionism has also been cited for depressed exports and reduced foreign exchange to service rapidly mounting debts.

Rising interest rates in the United States and other lending nations further contributed to mounting debt pressures. Big real interest rate differentials are blamed by some Latin American economists as a factor in attracting flight capital from the region. Lower interest rates, they contend, would keep funds invested at home, stem unemployment, and contribute to long-term economic growth.

Ironically, the adjustment measures instituted by many Latin American nations may have contributed to darker long-range investment prospects. Some analysts contend that the drop in developed countries' sales of manufactured goods to Latin America has jeopardized investment plans in the region. Rather than following exports into the market with manufacturing investments, advanced nations in many cases are holding off on such endeavors. Furthermore, reduced exports by the United States, Japan and Europe have meant idled domestic capacity in those countries, which has dampened demand for Latin American exports. The cycle is therefore reinforced.

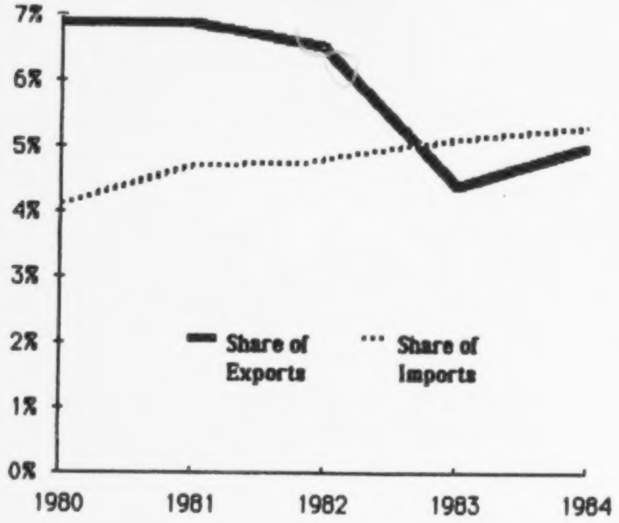
The Japanese government has been cooperating with Latin American borrowers and major lenders in taking steps to relieve some of the immediate pressures on debtor nations. Tokyo recently agreed to reschedule Brazil's debt payments, for example. Officials recognize that these are not long-term solutions and that only major economic adjustment policies can rectify the problem. It may be, however, that some steps taken by debtor nations will conflict with the demands of Japanese industry for conditions that contribute to a favorable trade and investment environment.

The debt situation has also produced severe constraints on trade and investment by virtually eliminating country risk and export insurance. Loan guarantees are unavailable for most Latin American countries, and Japan's risk insurance programs have been drained by Mitsui & Co., Ltd's $3 billion disaster in Iran with the Bandar Khomeni refinery project.

Trade Relations

These conditions have produced doubts in Japan as to the long-term future of Latin American markets. The potential offered by the region's considerable natural resources, however, coupled with protectionist policies aimed at generating import substitutes in the region, have generated a fair volume of trade and investment. Trade between Japan and the nations in the area follows a predictable pattern. In the simplest -- and somewhat overstated -- terms, Japan imports raw materials from Latin America and exports industrial products in return.

Latin America's Share of Japan's Total Trade (in percent)



Japan's total trade with Latin America amounted to $14.6 billion in 1980, with imports of $5.7 billion and exports at $8.9 billion. While Japanese purchases from the region have grown steadily, the effects of the global recession and restrictions on imports have restrained Japanese exports, which dropped from $10.5 billion in 1981 to $6.4 billion in 1983. Exports rebounded in 1984, but have not yet reached their previous highs. From the Latin American perspective, Japan is a slightly more important trading partner, ranking number-two in overall trade behind the United States.

Japan's imports from Latin America are concentrated in raw materials. Industrial supplies accounted for 76.3 percent of the total in 1980 and 77.9 percent by 1984. Oil from Mexico and Venezuela has been the most important commodity in recent years and is likely to remain so. Japanese exports to Latin America consist of machinery and transport equipment, which accounted for sales of $6.2 billion in 1980 (69.7 percent) and $7.2 billion in 1984 (84 percent). Ships and motor vehicles head the export list, followed by steel.

Because of Japan's reliance on imported raw materials, Latin America has become a more important source of its total imports over the last five years. The region provided 4.1 percent of all imports in 1980, rising steadily to 5.3 percent in 1984. Japan remains heavily dependent on a small group of Latin American countries for sizable proportions of its total iron ore, aluminum and copper purchases.

However, Latin America's importance as an export market has fluctuated along with international economic tides. In 1980, the region bought 6.9 percent of Japan's total exports but only 4.3 percent by 1983. Despite some improvement in 1984, these variations illustrate why many Japanese businessmen are skeptical over the region's potential as an export market for finished goods. The vulnerability of trade in the region is demonstrated by trade figures for Chile and Peru. Japan's exports to Chile dropped from $462 million in 1980 to $291 million in 1984, while sales to Peru plummeted from $306 million to $160 million.

Examining Japan's overall trade with the region is somewhat misleading since the bulk of the trade is conducted with a handful of countries, mainly Brazil and Mexico. Mexico, for example, supplied almost one-third of all of Japan's imports from the region last year; Brazil and Mexico combined accounted for nearly three-fifths of its Latin American imports. On the export side, Panama was Japan's largest Latin American customer, buying $3.4 billion (40.3 percent) of the products sold to the region, with ships alone producing $3 billion in sales. Given the area's considerable natural resources, the potential for other nations to play important roles in Japan's overseas trade and investment activities is significant, but for the foreseeable future, only a small number of countries is likely to be of importance.

This situation, coupled with the pattern of trade, has resulted in severe criticism of the Japanese government and private sector by those interested in promoting regional development and economic integration. They seek greater Japanese public and private investment in the region, particularly in intermediate industries. Latin American officials are also concerned with access to Japanese markets in order to accelerate exports to the world's second-largest economy. For example, Argentina, a major agricultural producer, has expressed concern over what it perceives to be Japanese barriers restraining imports of agricultural products.

Even in resources, Japan's purchases in many categories are still limited compared with the country's dependence on other regions. In some respects, imports of Mexican oil reflect an emphasis on diversifying raw material sources. Official assessments of political and economic conditions by the Ministry of International Trade and Industry (MITI) and the Ministry of Foreign Affairs have alluded to the need for diversification to prevent dependence on a particular supplier, which could jeopardize Japan's security. This is a particularly sensitive point, since neither political nor economic stability in Latin America can be taken for granted. Regional resource development by Japanese interests is, therefore, more of a hedge against potential restrictions in other parts of the world rather than an end in itself.

Japan-Latin American Investment

Japanese direct investment in Latin America ranks in third place, behind the United States and Asia. As of March 1984, $10.7 billion had been invested in the region, representing 17.5 percent of the total. About one-half of Japan's limited overseas investment in the 1950s and 1960s went into Latin America, mainly in textiles. The late 1960s saw more capital invested in resource development, particularly Peruvian copper and lead and Brazilian iron ore. Manufacturing received more attention in the 1970s, particularly in Brazil, where Japanese companies invested in steel, nonferrous metals and machinery. In recent years, resource development has continued, but manufacturing investment has slowed, although the proportion invested in manufacturing relative to the total remains higher in Latin America than in any other region except Asia.

Several factors favor continued Japanese private-sector investment in Latin America. Government policies have emphasized industrial development in the region since the 1960s by promoting economic integration and diversification. This translates into more sophisticated economies that gain their strength not only from resource and other primary exports, but also from higher value-added industries. Moreover, Latin American markets have considerable potential for Japanese finished goods, which, coupled with policies that emphasize local production, can be expected to encourage Japanese investment.

There are, however, elements that temper Japanese investment in the region. Wage levels are still higher than in many Asian countries closer to Japan; labor problems are more persistent and work stoppages more common; and the infrastructure necessary to support many investments is limited. Government policies have also deterred Japanese investment. High local content in manufacturing is generally required, although traditionally, Japanese companies aim initially at lower levels of local content with gradual increases as they gain experience. Local funds are often limited, understandable in the face of the debt problem, and many governments have imposed what Japanese business and government officials regard as excessive restrictions on foreign capital and profit repatriation.

A more fundamental conflict exists over the types of industries favored by governments and those in which private investors have expressed an interest. Japanese observers say that government incentives are slanted heavily in favor of export industries geared toward finished goods. Many of these, however, cannot produce goods that are competitive in price and quality on international markets. A more sensible strategy, analysts argue, is to foster primary processing of natural resources, and expand manufacturing industries that produce semi-processed or intermediate goods. Analysts contend that success in such industries is within the capabilities of most Latin American countries and that this specialization would produce higher average profits.

Latin Americans levy their share of criticism at Japanese investment patterns and practices. First of all, current levels, while welcomed, are viewed as insufficient. Officials continue to encourage accelerated investment. Second, business expects too high a return on investment, they charge. This is an unusual accusation in the case of Japanese firms that operate on razor-thin margins in many cases, but many local officials feel that Japanese companies should accept lower returns in order to aid the region.

One of the most politically sensitve charges is that Japanese investment favors capital-intensive projects over labor-intensive industries. This is particularly important in light of continued high unemployment rates in most Latin American countries, especially in urban areas. Some skeptical analysts have also suggested that Japan is concerned over a possible "boomerang" effect -- that investments made today could result in competition tomorrow.

For all the concerns, however, some dramatic results are visible. Brazil's Ishibras shipyard, built by Ishikawajima-Harima Heavy Industries Co., Ltd. largely with Japanese funds, is the largest facility of its kind in the southern hemisphere. Steel mills constructed in part with Japanese funds have become, much to the distress of the United States, competitive in international markets. Much of the region's port and infrastructure development has been encouraged by Japanese investment.

Future, large-scale projects may be particularly well suited for Japanese involvement. Foremost among plans now under consideration is the possible construction of a sea-level canal through Panama to replace the existing lock canal, which will be hopelessly outdated by the turn of the century. The sea-level canal project, now being formally examined by the governments of Panama, Japan and the United States, would rank as the most dramatic undertaking of its type in modern memory. Japanese technology and financing dovetail nicely with the needs of Panama for a new, revenue-producing canal, U.S. security concerns and Japan's own quest to facilitate export and import shipments. While the project poses considerable obstacles, its planning at this stage illustrates the importance of Japan's role in the region.

Political Relations

Because of Latin America's abundant raw materials, considerable human resources and strategic position, it is expected to play an increasingly important global role. Japanese economic policymakers feel that the region's oil and untapped resources complement Japan's own economy and presage continued and growing economic ties. One traditional link has influenced Japanese attitudes: the more than 1 million Japanese resident in South America, mainly in Brazil -- the largest Japanese population in any country outside of the home islands. Many of these expatriots are descendents of immigrants who ventured forth at the beginning of the twentieth century. Their presence retains a certain emotional bond in the minds of many Japanese toward the region because they have been assimilated into the country more successfully than in many other parts of the globe.

Political relations have accompanied closer economic ties, both as a matter of necessity and because of Japan's gradual assumption of responsibilities commensurate with its economic prowess. The political importance Japan places on Latin America is reflected by the increasing number of high-level visits by officials of both nations. Foreign Minister Shintaro Abe visited Mexico, Ecuador, Honduras, Haiti and Jamaica in 1983, and toured several Central American countries early this year. Diet members traveled to Paraguay and Argentina in 1983 to exchange views on common economic and political problems as well.

At this point, however, Tokyo's influence in the region is still limited. Although concerned about Central American security, for example, there is little of a practical nature that the government can formally do other than provide moral support to those calling for internal settlements of disputes. Japan has been cautious about taking a hard position on these issues, even where there are clear international implications, because of its limited influence, the importance of the United States to the region, and its own growing economic stake in the region. Japan remained studiously neutral, for example, during the Falklands war in deference to Argentina, although it consistently sided with the United States in United Nations debates on the crisis.

In some respects, this is both understandable and desirable. "Latin America is in the United States' backyard," notes one official, "not ours. We are separated by the Pacific Ocean." This distance has limited Japan's potential for political influence in the region. Indeed, this may be the most favorable situation for Japan-Latin American relations. By remaining discrete, Japan avoids incurring the wrath of any one country, and is free to maintain momentum in trade, aid and other fields. A significant premise, obvious but often forgotten, is that Japan conducts its relations in the Latin American region as a member of the Western camp. Consequently, the country is not going to take steps that would jeopardize the political stability in the Western hemisphere or alienate the United States.

Relations with individual countries vary, although government officials generally feel that Japan maintains cordial ties with all nations in the region. Officially, no one nation is favored over another, but as a practical matter, countries with the strongest economic positions do attract more attention both politically and economically. Former prime minister Takeo Fukuda was dispatched to Brazil as a special envoy to indicate the importance the government placed on the election of Tancredo Neves after 20 years of military rule. Colombia has been mentioned unofficially as a possible "rising star" because of coal and oil development there.

Officially, the government has expressed its understanding of the problems posed by social inequality in Latin America and has said it wishes to assist through private-sector development, scientific and technological cooperation and official development assistance. To date, however, its aid has been limited; Latin America ranked third behind Asia and the Middle East in total Japanese aid from 1969 to 1983, constituting 18.8 percent of Japan's overseas assistance.

Most of that aid -- which, critics note, is very limited to begin with -- is concentrated in Mexico and Peru. Official development assistance in 1983 for Central and South America amounted to $240.6 million: $128.7 in government loans, $37.1 million in grants, and $74.8 million in technical assistance. Of that total, Mexico received $46.9 million (19.5 percent), followed closely by Peru with $45.1 million (18.7 percent). For 1983, Central and South American nations received 9.9 percent of total Japanese development assistance, making Japan the fifth largest aid contributor to the region. By contrast, the United States provided more than $1.9 billion in loans and $400 million in grants to Latin America in 1982.

Japanese officials explain these relatively low aid levels, at least in part, by the fact that aid is often geared to income levels in the recipient countries. Despite the economic problems in Latin America, they say, income levels in many countries are relatively high, precluding new aid to the region. Another reason is that Tokyo lacks a coherent policy toward the region, and had a late start in emphasizing aid programs as a significant element of its foreign policies. However, the pattern of assistance indicates that the final consideration is a practical one: certain countries, because of their location or economic importance, have priority in limited government programs. The Nakasone government has taken some steps to help rectify this situation. Tokyo completed draft proposals last December for $120 million in Japanese funds for a development project in Brazil's Serrad area and the prime minister has said Tokyo is willing to lend another $100 million to the country.

The Future

Undeniably, relations between Japan and the major nations of Latin America will continue to grow stronger, particularly on the economic front. Ties with the most important countries in the region -- Mexico, Brazil, Venezuela and others -- will maintain their momentum, but wider relations and growth with other states is contingent largely on restoration of predictability in political and economic conditions.

Officials from both sides are still in the process of exploring bilateral relationships, but it is safe to assume that, at the very least, both Japan and the various Latin American nations will give serious thought to promoting these ties, given the vast potential for meeting mutual economic needs.

For further information, contact Michael Chinworth.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Table 1: Japan's Exports to Latin America, 1980-84

(in millions of dollars, f.o.b. value basis)

	1980	1981	1982	1983	1984
Total Exports	$8,917.5	$10,515.6	$9,085.7	$6,391.2	$8,548.6
Food	50.0	43.7	33.4	31.4	55.7
Crude Materials and Fuels	113.0	71.5	36.5	50.7	34.3
Light Industrial Products	612.0	657.8	467.8	323.5	355.8
Heavy Industrial Products	8,102.1	9,690.4	8,525.5	5,963.1	8,085.4
Metals and Metal Products	1,610.4	1,660.7	1,439.8	551.5	696.1
Steel	1,407.7	1,409.5	1,259.6	425.6	544.2
Machinery and Transport Equipment	6,219.7	7,777.5	6,871.6	5,225.5	7,178.7
Motor Vehicles	1,425.7	1,429.6	985.6	942.2	1,164.4
Vessels	893.0	1,738.8	2,773.0	2,129.1	3,228.3

Table 2: Japan's Imports From Latin America, 1980-84

(in millions of dollars, c.i.f. value basis)

	1980	1981	1982	1983	1984
Total Imports	$5,700.3	$6,668.6	$6,267.8	$6,461.7	$7,230.3
Food	1,115.6	964.9	994.0	1,313.5	1,271.7
Industrial Supplies	4,348.1	5,409.4	5,030.6	4,956.2	5,628.9
Crude Materials	2,118.4	2,100.2	1,993.5	1,778.9	1,944.6
Mineral Fuels	952.8	2,137.8	1,812.8	1,834.3	2,007.3
Industrial Chemicals	194.2	229.1	205.2	285.4	391.5
Metals	974.0	819.0	889.9	945.6	1,163.9
Yarns and Fabrics	12.6	17.7	25.4	23.9	37.6
Capital Goods	190.5	216.9	122.8	130.2	253.0
Consumer Nondurables	4.7	6.8	6.6	4.8	13.6
Consumer Durables	6.5	5.8	5.8	5.1	2.8

Table 3: Japan's Exports to Selected Countries, 1980-84

(in millions of dollars, f.o.b. value basis)

	1980	1981	1982	1983	1984
Mexico	$1,223.4	$1,705.0	$975.9	$578.9	$887.9
Panama	1,415.8	2,209.7	2,924.8	2,169.3	3,444.0
Venezuela	834.9	924.9	1,178.5	348.5	347.7
Brazil	1,114.8	1,367.5	1,042.8	738.3	639.5
Chile	462.4	742.0	231.1	140.9	290.9
Peru	306.1	350.1	323.3	181.4	160.1
Argentina	997.5	784.7	267.5	311.7	391.7

Table 4: Japan's Imports from Selected Countries, 1980-84

(in millions of dollars, c.i.f. value basis)

	1980	1981	1982	1983	1984
Mexico	$934.2	$1,437.4	$1,522.1	$1,889.0	$2,259.8
Panama	61.3	131.2	107.1	68.0	167.9
Venezuela	691.0	912.4	723.3	570.0	467.3
Brazil	1,560.9	1,578.5	1,602.7	1,669.0	1,990.8
Chile	644.0	530.8	579.0	503.1	634.7
Peru	475.2	602.2	541.2	487.3	407.3
Argentina	287.2	281.1	413.1	543.7	489.1

Table 5: Latin America's Share of Total Japanese Exports, 1980-84

	1980	1981	1982	1983	1984
Total Exports	6.9%	6.9%	6.5%	4.3%	5.0%
Food	3.2	2.5	2.4	2.3	3.9
Crude Materials and Fuels	8.9	5.6	3.5	4.6	2.8
Light Industrial Products	3.9	3.6	2.8	1.8	1.9
Heavy Industrial Products	7.4	7.5	7.2	4.8	5.5
Metals and Metal Products	7.6	7.4	6.8	3.0	3.6
Steel	9.1	8.5	8.1	3.3	3.9
Machinery and Transport Equipment	7.6	7.8	7.6	5.3	6.0
Motor Vehicles	6.1	5.4	4.0	3.6	3.9
Vessels	19.1	23.9	40.4	35.5	43.9

Table 6: Latin America's Share of Total Japanese Imports, 1980-84

	1980	1981	1982	1983	1984
Total Imports	4.1%	4.7%	4.8%	5.1%	5.3%
Food	6.9	5.5	6.3	8.0	7.2
Industrial Supplies	4.0	5.1	5.1	5.4	5.8
Crude Materials	9.8	11.9	11.8	11.1	11.5
Mineral Fuels	1.4	3.0	2.8	3.1	3.3
Industrial Chemicals	3.2	3.6	3.1	4.0	4.8
Metals	18.1	15.6	17.5	17.3	17.6
Yarns and Fabrics	0.9	1.3	1.9	1.9	2.2
Capital Goods	2.1	2.2	1.4	1.3	2.2
Consumer Nondurables	0.2	0.2	0.2	0.2	0.4
Consumer Durables	0.3	0.3	0.3	0.2	0.1

Table 7: Country Composition of Japan's Latin American Exports, 1980-84

	1980	1981	1982	1983	1984
Mexico	13.7%	16.2%	10.7%	9.1%	10.4%
Panama	15.9	21.0	32.2	33.9	40.3
Venezuela	9.4	8.8	13.0	5.5	4.1
Brazil	12.5	13.0	11.5	11.6	7.5
Chile	5.2	7.1	2.5	2.2	3.4
Peru	3.4	3.3	3.6	2.8	1.9
Argentina	11.2	7.5	2.9	4.9	4.6

Table 8: Country Composition of Japan's Latin American Imports, 1980-84

	1980	1981	1982	1983	1984
Mexico	16.4%	21.6%	24.3%	29.2%	31.3%
Panama	1.1	2.0	1.7	1.1	3.3
Venezuela	12.1	13.7	11.5	8.8	6.5
Brazil	27.4	23.7	25.6	25.8	27.5
Chile	11.3	8.0	9.2	7.8	8.8
Peru	8.3	9.0	8.6	7.5	5.6
Argentina	5.0	4.0	6.6	8.4	6.7

Table 9: Japan's Foreign Direct Investment in Latin America, FY 1979-FY 1983

(in millions of dollars)

	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983	Total March 1984
Total	$1,207	$588	$1,181	$1,503	$1,878	$10,730
Brazil	409	170	316	322	410	3,955
Panama	142	222	614	722	1,223	3,245
Mexico	516	85	82	143	121	1,164
Peru	1	3	4	185	0	679
Bermuda	2	6	32	5	14	424
Cayman Islands	35	16	26	6	1	216
Netherlands Antilles	n.a.	n.a.	--	31	69	182
Argentina	n.a.	8	58	45	5	150
Chile	12	9	3	13	3	142
Puerto Rico	5	7	15	6	--	140
Venezuela	28	12	7	8	1	130
Other Countries	58	50	24	19	31	301

Table 10: Japan's Aid to Latin America, 1983

(in millions of dollars)

	Grants	Technical Assistance	Loans	Total
Total	$37.1	$74.8	$128.7	$240.6
Mexico	1.4	8.2	37.3	46.9
Peru	16.1	10.7	18.3	45.1
Bolivia	4.1	5.4	25.2	34.7
Brazil	--	14.6	12.5	27.1
Paraguay	0.8	9.5	11.5	21.8
Honduras	8.7	2.3	6.1	17.1
Colombia	0.7	2.7	11.9	15.3
Jamaica	--	0.2	6.0	6.2
Argentina	--	3.9	1.7	5.6
Panama	--	4.2	--	4.2
Chile	0.6	3.4	0.1	4.1
Dominican Republic	0.1	1.7	1.4	3.2
Ecuador	1.8	1.2	-0.5	2.5
Haiti	1.6	--	--	1.6
Guatemala	--	1.5	--	1.5

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JEI

REPORT

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April 26, 1985

THE JAPANESE ECONOMY IN 1984

Summary

The Japanese economy roared back last year, putting in its best annual performance in over ten years and ending the doldrums that had gripped the nation since the beginning of this decade. While U.S. growth cooled noticeably throughout 1984, the Japanese economy was definitely on the upswing as most domestic growth components made steady headway. Recovery also took firmer root in other industrialized and developing countries, providing a more hospitable environment for continued growth.

The most spectacular and troublesome aspect of Japan's 1984 growth was the role played by international trade. Surging Japanese exports and rebounding imports, combined with monetary system reforms that opened the floodgates to Japanese investment abroad, contributed significantly to global economic recovery. This development was not without criticism, however, as Japan's trade surpluses with its partners ballooned. The government remained committed to spurring domestic growth, but was fettered by fiscal deficit policies. The challenge for policymakers was to find alternatives to traditional Keynesian prescriptions for sustaining a domestic rebound.

Gross National Product Performance

According to the Economic Planning Agency (EPA), Japan's total output of final goods and services rose an impressive 5.8 percent in inflation-adjusted terms in 1984 (see Table 1). This reversed the trend in the rate of real gross national product (GNP) growth that began in 1980, when growth slowed 0.4 percentage point to 4.8 percent, and lasted until 1983, when GNP grew just 3.4 percent. The sharp turnaround surprised everyone; both the EPA and the Organization for Economic Cooperation and Development (OECD) predicted 4 percent growth at 1984's outset. As the year progressed, the economy was performing so well that EPA raised its forecasts for the fiscal year in late September. Even so, the economy surpassed expectations.

The good news about overall growth masked the strengths and weaknesses of the rebound. EPA had hoped for real growth of 4.1 percent in personal consumption, 5.2 percent in residential construction and 5.1 percent in nonresidential fixed investment. The economy's actual performance was quite different, coming in well under the estimates for the first two components and rising beyond the forecast for the third category.

EPA's estimates for the external sector were also off by a significant margin. The initial prediction of a $23 billion current-account surplus and a $34 billion trade surplus were extremely conservative in retrospect. For the second year in a row, Japan set records in both accounts: 1984's trade surplus totaled a hefty $44 billion, which produced a current-account surplus of $35 billion. As a consequence, the economy remained highly dependent on foreign trade (see Figure 1), and Japanese policymakers fretted, even more than the

Figure 1: Growth of Gross National Product by Component by Quarter, 1982-1984

(seasonally adjusted, annualized quarterly rates of growth)

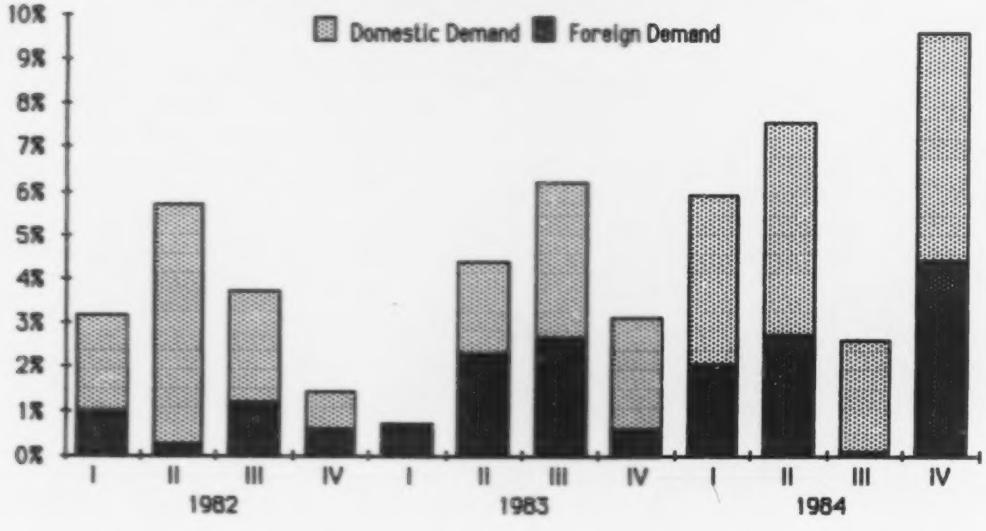

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Table 1: Japan's Real Gross National Product at Constant (1975) Prices

(in billions of yen, seasonally adjusted, quarterly totals and rates of growth at annual rates)

	1983	1984	January-March 1984	April-June 1984	July-September 1984	October-December 1984
Gross National Product	Y210,903.5 (3.4%)	Y223,050.6 (5.8%)	Y217,927.5 (5.9%)	Y221,934.9 (7.6%)	Y223,366.6 (2.6%)	Y228,540.9 (9.6%)
Personal Consumption Spending	110,702.4 (3.4%)	113,708.4 (2.7%)	112,899.1 (3.7%)	113,323.8 (1.5%)	114,054.3 (2.6%)	114,354.5 (1.1%)
Private Residential Construction	10,060.0 (-5.9%)	9,982.6 (-0.8%)	9,958.3 (-6.0%)	9,826.1 (-5.4%)	9,965.3 (5.8%)	10,198.7 (9.7%)
Private Fixed Nonresidential Investment	36,366.0 (3.4%)	40,392.7 (11.1%)	38,716.6 (12.0%)	39,678.7 (10.3%)	40,658.3 (10.2%)	42,343.3 (17.6%)
Change in Business Inventories	869.4 (-52.8%)	1,190.3 (36.9%)	834.6 (-276.1%)	1,155.2 (267.0%)	1,485.9 (173.7%)	1,282.2 (-80.4%)
Government Current Expenditures	19,728.6 (2.9%)	20,160.8 (2.2%)	19,991.6 (3.6%)	20,152.2 (3.3%)	20,270.8 (2.4%)	20,235.4 (-0.7%)
Government Fixed Investment	18,359.9 (-0.6%)	18,091.3 (-1.5%)	17,632.7 (-11.5%)	18,368.9 (17.8%)	18,504.7 (3.0%)	17,964.1 (-12.6%)
Change in Government Inventories	-320.2 (*)	92.7 (*)	-74.5 (*)	6.4 (*)	488.0 (*)	-47.5 (*)
Net External Sector	15,137.4 (26.6%)	19,431.8 (28.4%)	17,969.5 (47.9%)	19,423.6 (36.5%)	17,939.3 (-37.4%)	22,210.2 (135.0%)
Exports of Goods and Services and Factor Income Received	42,353.5 (4.7%)	50,037.6 (18.1%)	47,208.2 (19.6%)	49,462.1 (20.5%)	50,166.9 (5.8%)	53,141.9 (25.9%)
Imports of Goods and Services and Factor Income Paid	27,216.1 (-4.5%)	30,605.7 (12.5%)	29,238.7 (5.6%)	30,038.5 (11.4%)	32,227.6 (32.5%)	30,931.7 (-17.8%)

*Cannot be calculated or meaningless.

Source: Economic Planning Agency

previous year, over the consequences of the country's trade performance as exports outgrew imports.

Quarterly growth, except for a third-quarter dip caused by a surge in imports, accelerated throughout the year, reaching close to a 10 percent annual rate in the fourth quarter. Government outlays had only a minor impact, as declining current expenditures failed to slow the economy. Balancing the weak performance turned in by the government and private consumer spending, bullish private investment, resurgent residential construction in 1984's second half, and a strong net external sector stoked the economic fires.

Personal Consumption - Consumer spending remained a dark spot on the economy's shining record. Its growth rate dropped one-fifth from 1983, averaging less than half the overall rate of growth. On a quarterly basis, consumer demand started off at a healthly 3.7 percent annualized rate, but fell to 1.1 percent by the final three months of the year. Although this component still accounted for over half of GNP, its share fell from 52 percent in 1983 to 51 percent in 1984.

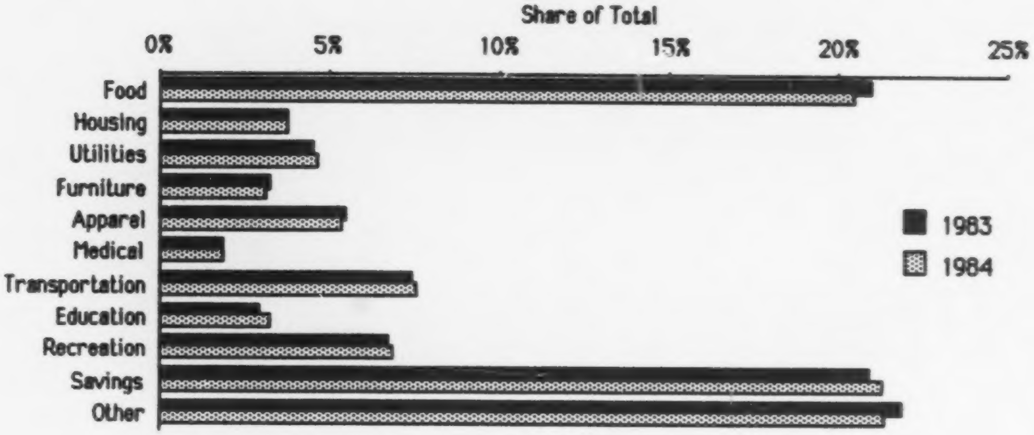
Government analysts were particulary concerned that this weak showing materialized despite a host of positive factors: an income-tax cut; spring wage hikes averaging 4.5 percent and an identical increase in biannual bonuses; an 8.6 percent jump in the incomes of second wage earners; an improvement in overtime hours of 5.3 percent; and a rise in disposable income of 4.4 percent. Factoring in inflation for 1984 (2.2 percent), disposable income rose 2.2 percent, far above the 0.7 percent real gain in 1983.

Higher food bills ate up 10.3 percent of the Y15,240 ($61 at current exchange rates) nominal increase in average monthly disposable income per household; transportation costs followed with a 9.9 percent share; education took 8.6 percent; utility bills, 8.3 percent; recreation, 7.7 percent; housing, 4.1 percent; household durables, 3 percent; medical care, 2.9 percent; apparel, 2.1 percent; and miscellaneous expenditures, 12.1 percent. Savings continued to take the lion's share of the increase, 31 percent, although this represented a decline from the previous year's 34.9 percent.

Nevertheless, savings as a percent of disposable income rose to 21.3 percent from 1983's 20.9 percent. The portion of income going to basic needs, including utilities (4.7 percent), transportation (7.6 percent) and education (3.3 percent), similarly turned up. The share devoted to discretionary expenses fell, with purchases of household goods declining to 3.2 percent and clothing to 5.4 percent, although recreation rose by a slight 0.1 percentage point to 6.9 percent (see Figure 2). Despite improved conditions, it is clear that Japanese consumers remained as thrifty as ever, posing a major hurdle to increased sales of domestic or foreign consumer goods.

Private Residential Construction - After putting in a depressing performance in 1983 for the fifth year in a row, the housing industry staged a strong comeback in the second half of 1984 that almost erased the first half's contraction. The slim 0.8 percent real decline on a GNP basis for 1984 hid a jump in housing starts of 50,485 units, a 4.4 percent increase over 1983.

Figure 2: Distribution of Disposable Income, 1983-1984



The trend toward smaller units continued as the floor area of new housing starts rose just 0.8 percent. Contractor prices, however, rose a healthy 4.8 percent. Rental units increased their share of new construction for the second year, taking 39.1 percent versus 34.7 percent in 1983 -- just slightly less than the 39.6 percent share of owner-occupied units. This rapid expansion of rental construction was largely due to consumer reluctance to shoulder mortgages in what they still perceived as uncertain times.

This attitude was amplified by the government's continued austere fiscal policies. The publicly funded Housing Loan Corp. (HLC), which provided approximately 34 percent of the total supply of housing funds in 1984, recorded a reduction in the value of new loans of 1.4 percent and a 9.7 percent drop in the number of new cases. Although increased lending by banks, savings and loans, and mortgage companies wiped out the HLC's contraction (a Y286.5 billion gain versus a Y43.4 billion decline), all lenders experienced a reduction in the number of new loans because of the absence of middle-class buyers. Psychological factors are clearly restraining the housing market, a situation the government could -- but may be unwilling to -- alter.

Private Nonresidential Investment - In terms of investment in plant and equipment, 1984 represented a return to the high growth era of the 1960s, with an 11.1 percent real increase. This was nearly quadruple 1983's 3.4 percent level and reflects consistent quarterly performances of 10 percent-plus. After hitting a plateau in the middle of the year, investment turned sharply upward in the final quarter of 1984, relieving concerns about a possible economic slowdown.

A sectoral analysis of investment activity reveals particular strength in electronics, nonelectric machinery, nonferrous metals, ceramics and motor vehicles (see Table 2). Operating rates provide the underlying rationale for

Table 2: Capital Investment by Sector, FY 1983-FY 1984

(in billions of yen; percentage change)

	FY 1983 (Actual)		FY 1984 (Estimated)	
All Industries	Y19,043.8	-1.0%	Y21,090.4	10.7%
All Manufacturing	8,151.4	-2.9	9,421.8	15.6
Foods	563.5	5.3	516.5	-8.3
Textiles	149.1	-14.8	182.8	22.6
Wood Products	30.0	21.1	40.4	34.5
Paper and Pulp	186.2	-3.9	312.2	67.7
Chemicals	1,195.8	1.3	1,259.5	5.3
Oil and Coal	267.9	-5.2	281.6	5.1
Rubber and Leather	114.9	21.2	147.4	28.3
Ceramics	302.3	-6.1	395.1	30.7
Steel	960.9	-16.0	845.9	-12.0
Nonferrous Metals	212.5	-14.5	260.5	22.6
Metal Products	253.4	20.7	275.0	8.5
Nonelectric Machinery	409.3	-10.6	506.3	23.7
Electric Machinery	1,692.0	8.8	2,387.6	41.1
Transportation Machinery	1,128.7	-14.2	1,287.0	14.0
Precision Machinery	226.8	4.7	230.7	1.7
Other Manufacturing	458.2	4.4	493.5	7.7
All Non-manufacturing	10,892.5	0.5	11,668.6	7.1
Agriculture	36.1	73.7	19.6	-45.7
Mining	219.8	-2.3	197.4	-10.2
Construction	324.0	-12.4	267.3	-17.5
Wholesaling and Retailing	1,045.4	-16.8	1,071.1	2.5
Wholesaling	513.2	-23.9	469.9	-8.4
Large Retailers	279.1	-12.8	275.7	-1.2
Other Retailers	253.1	-3.5	325.4	28.6
Finance and Insurance	507.6	12.2	585.5	15.3
Real Estate	846.1	3.2	942.1	11.4
Transportation and Communications	1,364.4	-12.5	1,329.7	-2.5
Private Railways	283.9	-11.7	309.0	8.8
Ground Transportation	317.8	12.2	290.5	-8.6
Shipping	370.3	-39.0	311.2	-16.0
Other	392.4	13.1	419.1	6.8
Electric Power	3,401.7	0.4	3,397.0	-0.1
Gas	282.4	-12.0	282.8	0.1
Services	2,865.0	18.3	3,576.1	24.8

Source: Economic Planning Agency

the prominence of the first three sectors as output boomed, pushing up capacity utilization in the manufacturing sector by 8.4 percent. The large increases in other sectors were devoted to modernization, for example in the ceramics and motor vehicle industries, or rationalization, which characterized the oil industry. These statistics underscored the importance of foreign trade to Japan's economy and the softness of domestic demand.

Change in Inventories - The economic upturn was clearly reflected in this erratic component of gross national product, which rebounded from a three-year decline, rising 36.9 percent. The strength of the rebound in production and shipments was evident from the large quarterly changes. The same industries that accounted for the strength of capital investment also contributed to the 11.1 percent rise in manufacturing production. Although inventories were up significantly, there were few signs of a slowdown at the end of the year.

Public Sector - Because of the government's strong desire to cut the deficit, public spending provided little stimulus in 1984, as both current expenditures and fixed investment came in under 1983's levels. The Nakasone government continued to spend the majority of its outlays in the first half of the fiscal year (April to September), a policy that has not been very successful at promoting expansion for two reasons. First, supplementary budgets, which might be expected to boost spending at the end of the fiscal year, have been held down in the name of austerity. And second, since front-loading is now a standard practice, the market does not respond to the seemingly robust figures of the first two fiscal quarters, nullifying any psychological impact from government spending.

The growth of current expenditures slid throughout the year and would have been even lower in the last quarter of fiscal 1983 (January-March 1984) had it not been for accelerated emergency relief outlays and a few other government support programs. Public works expenditures showed a sharp 1.5 percent drop in real terms, nearly triple 1983's rate of contraction. Mr. Nakasone appeared to be keeping his pledge to get government expenditures under control, but as a consequence, the public sector continued to play a smaller role in generating economic growth.

External Sector - Because the net external component is the difference between exports and imports, its erratic behavior in 1984 was not unusual. Even in light of the global recovery, 28.4 percent real growth was surprisingly strong. While this figure was 26.6 percent in 1983, it resulted from a modest gain in exports and an import decline. The 1984 figure had a more robust foundation: an 18.1 percent export growth and a 12.5 percent import gain. All this activity kept the share of overall GNP growth directly attributable to foreign trade at a high level in 1984 -- 36 percent, although this was down sharply from 1983's 50 percent contribution.

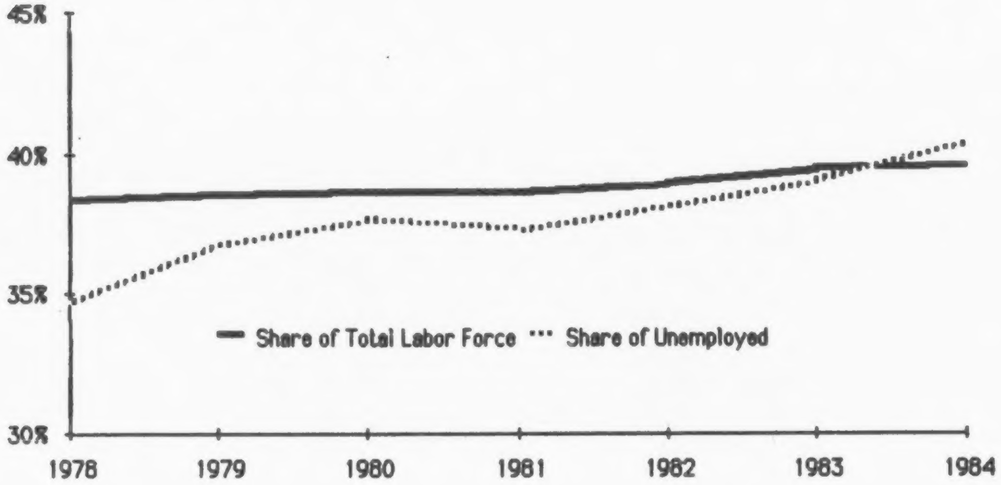
Unquenchable overseas demand for Japanese consumer goods, business equipment and automobiles kept exports at a high level throughout the year. In turn, the increase in demand for industrial inputs coupled with stable commodity prices drove up imports. The third quarter was somewhat anomalous because of an import surge/export slump. Japanese observers attributed the figures to an acceleration of oil purchases in advance of a new oil consumption tax. According to official trade statistics, however, quarterly oil imports barely changed over the last three quarters of the year. In any case, 1984 represented a return to export-led growth reminiscent of earlier decades -- a cause for concern among policymakers.

Labor and Inflation

Japan's employment picture in 1984 was bright in comparison to other industrialized countries, but bleak by historical standards. Although a net 380,000 new jobs were created, unemployment actually rose over the previous year, hitting 2.7 percent, the highest level since such statistics were first compiled 32 years ago. On a monthly basis, a downward trend was visible: after peaking at 3.1 percent in March, the rate fell steadily to 2.4 percent at year's end.

One of the more interesting aspects of the labor pool was the increasing role of women, who accounted for 57 percent of 1984's new workers and 63 percent of 1983's labor market entrants. Women took 52 percent of the new jobs in 1984, down from the 67 percent level of the previous year. On the other hand, women represented a disproportionate share of the unemployed, accounting for 80 percent of the total. Since the labor force participation rate actually fell 0.4 percentage point to 63.4 percent in 1984, it appeared that women were acting as buffers in Japan's labor market (see Figure 3).

Figure 3: The Role of Women in Japan's Labor Force, 1978-1984



Japanese workers across the board scored impressive productivity gains in 1984. In manufacturing and mining, output per worker jumped 9.9 percent, but as was the case with other measures of economic activity, the average was boosted by a few star performers: electric machinery, 20 percent; precision equipment, 16.6 percent; steel, 12.1 percent; and nonelectric machinery, 11 percent. Gains were scored by workers in nearly all industries, however.

Inflation was kept under control in 1984, in large part due to productivity gains, moderate wage increases and stable world prices for basic industrial materials and foodstuffs. Wholesale prices fell for the second year, slipping 0.3 percent as declining prices for raw materials (off 2.5 percent) and intermediate goods (down 0.5 percent) more than offset higher prices for final goods (up 0.5 percent), especially consumer goods. Stable or declining import prices also helped keep wholesale prices in line, particularly the 4.1 percent drop for raw materials and fuels.

Consumer prices rose 2.2 percent, only slightly faster than 1983's 1.9 percent increase. Higher prices for food (up 2.8 percent), the single largest component in the index, were the main culprit, but the rising cost of clothing (up 2.6 percent), recreation (up 2 percent) and transportation (up 0.9 percent) also contributed.

Despite the ups and downs of the yen, export prices rose by a slim 0.6 percent in 1984 after tumbling 6 percent the year before. Voluntary restraints on automobiles again let Japanese manufacturers raise prices, pushing overall transport equipment prices up 2.2 percent. Prices for other products remained generally stable, with the exception of metals and metal products, which rose 2.3 percent.

Monetary Policy

At first glance, it would appear that Japanese monetary policy authorities faced no difficult decisions in 1984 because of stable prices and surging domestic investment. The usual indicators of the direction of monetary policy -- money supply growth and interest rates -- present a picture of calm. In reality, 1984 was a very busy year, as Finance Ministry (MOF) and Bank of Japan (BOJ) officials focused on the basic structure of the country's monetary system and its links to international financial markets.

Money supply growth in 1984 was consistent with the growth of the economy. All categories of money showed increases. M1 plus certificates of deposit (CDs) was 8.5 percent higher in December than in the year-earlier month, itself 6.4 percent above the December 1982 mark, and the broader measure of M2 plus CDs grew 7.8 percent between December 1983 and December 1984, or slightly faster than 1983's 7.3 percent rate.

Interest rates drifted downward despite no change in the Bank of Japan's official discount rate (which is analogous to the Federal Reserve's discount rate). While the BOJ's official discount rate remained steady at 5 percent, the prime rate on long-term loans dropped by 0.3 percentage point twice in 1984, hitting 7.9 percent in late March and 7.6 percent at the end of October. Government pressure on the long-term banks to lower their rates was clearly intended to push other rates down and keep the recovery going. The interest rate on 10-year government bonds on the resale market drifted up and down, but ended the year almost a full point lower at 6.4 percent. Other market-determined rates, however, resisted downward pressure: call rates on the Tokyo market drifted from 6 percent in January to 5.7 percent in May and then moved up to 6.4 percent by December; and bond repurchase yields (gensaki) hovered around 6.3 percent throughout the year.

The yen-dollar exchange rate has been a recurring topic at U.S.-Japan negotiations -- talks that culminated in 1984 with the release of the report of the Ad Hoc Group on Yen/Dollar Exchange Rate, Financial and Capital Issues. The accord committed Japan to fundamental changes in its monetary system, opening it to market forces and integrating it with the international financial system. The accord's provisions will be implemented over several years; Tokyo agreed to institute the following changes in 1984.

Effective April 1, 1984:

- The real-demand rule for forward exchange-market transactions was dropped, allowing speculative dealings.
- The minimum allowable denomination for certificates of deposit was cut to Y300 million ($1.2 million) and the maximum allowable amount of issues was raised to 75 percent of a bank's net worth.
- The prohibition on the sale of foreign certificates of deposit and commercial paper on Japanese markets was abolished.

Effective June 1, 1984:

- The "designated company" system restricting foreign investment in certain companies was abolished.
- The government was authorized to issue foreign-currency-denominated government bonds.
- Guidance over lending abroad by Japanese banks was ended, including restrictions on the overall amount of lending, country limits, and restrictions on participation in syndicated lending.
- The limits on currency swaps by foreign and domestic banks were eliminated.
- The prohibition on Euroyen loans to Japanese residents was lifted.
- The guidelines for Euroyen bond issues by Japanese corporations was eased, expanding the eligible issuers to about 100.

Effective December 1, 1984:

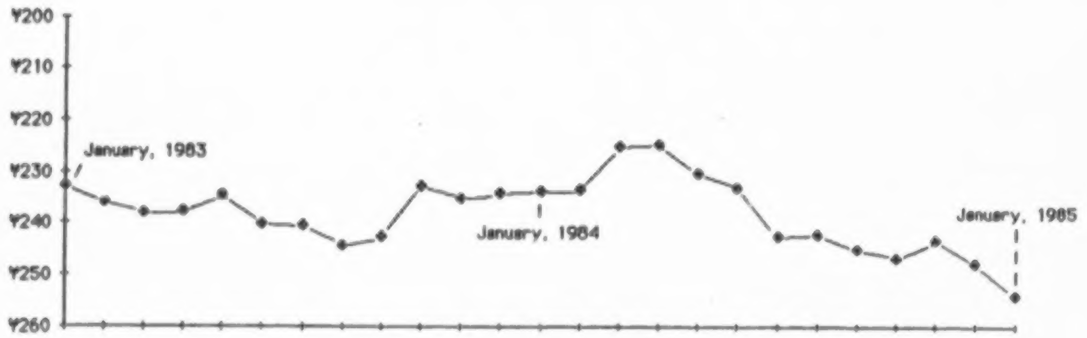
- Non-Japanese corporations, local and central governments, government corporations and international financial institutions were granted permission to issue Euroyen bonds with the same qualifications for issuers as in the samurai bond market, with no restriction on the size of issues. (Samurai bonds are yen-denominated bonds issued by foreign governments or international organizations.)
- Restrictions limiting lead underwriters on Euroyen bond issues to Japanese financial institutions were eliminated.

From the Japanese viewpoint, the changes improve the efficiency and flexibility of Japanese capital markets and the competitiveness of corporate and financial institutions. Consumers also benefit from greater reliance on free-market mechanisms by receiving improved services and higher returns. From the American side, the agreement was designed to increase international use of the yen, increasing demand and pushing the currency up relative to the dollar. A higher yen and freer interest rates were expected to reduce the international competitiveness of Japanese firms. It was thought, moreover, that liberalized capital markets would give U.S. banks and financial institutions a chance to gain a larger share of lucrative Japanese business.

Unfortunately, the strength of the American economy and high U.S. interest rates proved irresistible to foreign investors, including Japan's. After rising to Y226=$1.00 by April, the yen fell back to a plateau of Y245=$1.00 until late in the year when it fell precipitously, hitting Y251=$1.00 by December (see Figure 4). Still, Japanese corporations and foreign financial institutions took advantage of the new rules, and financial flows in and out of Japan skyrocketed. The problem was that the net flow was mostly out of the country, putting downward pressure on the yen. U.S. disappointment with the short-term effects of the agreement put pressure on Tokyo to accelerate deregulation, but Japanese authorities resisted, arguing that too rapid a change would disrupt the economy.

Figure 4: Yen-Dollar Exchange Rate, January, 1983-January, 1985

(yen per dollar, monthly average)



Whatever the pace of change, liberalization presented Japanese policymakers with a host of new problems, not only concerning implementation but also the basic conduct of monetary policy. Nonetheless, the yen-dollar accord represented an important step toward Japan's integration into the global economy.

Fiscal Policy

Fiscal stimulus remained under tight control in the FY 1984 (April 1984-March 1985) general account budget, which rose a tiny 0.5 percent over FY 1983's total. The success of the Finance Ministry's campaign to hold the line on spending began to impact on Diet members whose districts rely on public works projects. Nevertheless, the importance of curbing the current and accumulated deficits remained a top political priority, even if it was not urgent in economic terms.

The Y50.6 trillion ($225 billion) general account budget contained a Y12.7 trillion deficit despite a projected 7 percent increase in overall tax revenues from new taxes on luxury goods, higher automobile taxes and hikes in corporate taxes. Underscoring the debt problem was the 12 percent increase in debt service costs, the second-largest item after social security. Other discretionary items were cut, including public works and agricultural price supports, leading to a 12 percent decline in total discretionary spending. The drop would have been greater had it not been for increased outlays for defense (up 6.5 percent), foreign aid (up 7.9 percent), science and technology (rising 3.2 percent) and energy programs (up 0.9 percent).

Alterations of the tax codes were minor: industry got no new significant breaks. On the contrary, a temporary tax was levied on corporations and some other tax provisions were reduced to bring in more revenue. Business organizations began a campaign to reduce their tax burden, arguing that the Japanese government levied the highest effective tax burden of any industrialized nation. As the public's unhappiness with the tax system grew and the fiscal deficit expanded, politicians began preparing the country for an overhaul of the entire tax structure -- a process that is likely to take several years.

In addition, the Fiscal Investment and Loan Program budget, a second budget funded by deposits in the postal savings system, government trust funds and special taxes used for public works projects, exhibited negligible growth. Most programs were held constant or cut, putting political pressure on representatives from rural areas.

The FY 1984 supplementary budget was approved December 24, 1984, contributing an additional Y886 billion, or 2 percent, to spending. The additional funds were spent on disaster relief projects, a pay raise for civil servants, housing subsidies and various obligatory transfers.

As noted earlier, the impact of fiscal policy was marginally positive during 1984 given the miniscule rise in overall outlays and imposition of new taxes. Although the country's continued surplus of savings over investment narrowed in 1984, one could argue that there was still a large role for stimulative fiscal policy without adverse consequences. The political atmosphere for such a course, however, remained hostile. The disappointing fact was that the government failed to come up with concrete proposals to spur the growth of private domestic demand, leaving Japan highly dependent on overseas trade and susceptible to foreign pressure.

FY 1985 Budget Process - A continuation of this fiscal paralysis is likely given the Finance Ministry's guidelines for the fiscal 1985 budget and the medium-term budget outlook. That forecast painted a dark picture of ballooning debt service costs through 1988 even if current deficits were capped. The budget proposal for the current fiscal year, submitted by MOF at the end of 1984, showed no increase in discretionary spending, but a 3.7 percent increase in overall outlays because of growing interest payments on the national debt. It is clear that the government is emphasizing a crisis atmosphere to force the nation to a consensus on painful budget cuts and fiscal reforms. While this may be good politics, it does not spell good news for measures to support economic growth.

Administrative Reform - The idea that smaller government is better government bore fruit in 1984 when the Diet approved legislation to de-nationalize the domestic telecommunications and tobacco products markets. These steps represented significant victories for Mr. Nakasone and Japan's trading partners since they promised greater access to two of the country's most lucrative markets. The gains were not painless, however, as Washington and Tokyo debated the reforms under heavy pressure from domestic interests. Administrative reform has become strongly entrenched in public and private circles, promising further important changes in coming years.

Conclusion

The world's second-largest economy made significant strides in 1984, taking advantage of strong foreign demand, steady input prices and resurgent capital investment. The implications of this strong performance were that the country had completed its adjustment to the oil crises and was entering a new period of high growth. While Japan certainly seems to have adapted to higher energy prices and shifting world trade patterns, this conclusion may be a bit premature in light of the country's continued dependence on foreign trade. The movement toward knowledge-intensive domestic industries has picked up speed and will get a large boost from the opening of the domestic telecommunications market. The economy still faces several fundamental hurdles, however. A means of spurring domestic demand without expanded government outlays must be found, and the consequences of monetary liberalization must be dealt with. Despite these obstacles, the economy seems poised for solid growth over the medium term.

For further information, contact Jon Choy.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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U.S. EXPORTS TO JAPAN: A REVIEW OF 1984 SALES

Summary

With all the headline-making talk in Washington about limited market opportunities in Japan for American exporters, it is easy to forget that Japan is this country's best overseas customer for manufactured products as well as agricultural and industrial raw materials. Capital goods, in fact, were the export pacesetters in 1984, expanding 10 percent to $5.6 billion on top of a year-earlier jump of 15.4 percent. Consumer goods also remained firmly entrenched in the plus column, with growth doubling to 5.8 percent and pushing sales to $1.5 billion. Moreover, industrial supplies, which had fallen by 4.8 percent in 1983, rebounded 4.6 percent to $9.1 billion, mainly because of bigger sales of the many manufactured products in this category. In addition, food and feed commodities, after going up 11.7 percent, rose 6.7 percent to $5.9 billion. On balance, total U.S. sales expanded 7.7 percent in 1984 to $23.6 billion, even though most components of Japanese domestic demand were performing below par and the dollar shot up against the yen in the second half.

Export Profiles

Industrial Supplies - With resurgent domestic demand backing up the country's booming export business, the recovery in Japanese manufacturing spread last year from capital goods and consumer products to steel, nonferrous metals, petrochemicals, paper and paperboard, textiles and most other basic industries. Paradoxically, this was not good news for American suppliers of many big-volume intermediate goods.

Take petrochemicals for example. The Japanese petrochemical industry got production costs under better control in 1984, thanks largely to declining prices for naphtha, its primary feedstock and fuel, and also because of the continuing closure of small, inefficient plants for the production of ethylene, the basic building block for petrochemical intermediates in Japan. These improvements blunted the competitive edge American exporters had previously wielded in commodity petrochemical intermediates -- whether derived from benzene, xylene and other aromatics (cyclics) like styrene monomer or, like ethylene dichloride and acrylonitrile, based on ethylene, propylene and other olefins (acyclics). At the same time, though, strengthening demand for nearly all downstream petrochemical products, including plastics, synthetic fibers, synthetic rubber, fertilizers and surface-active agents, boosted U.S. sales of a long list of specialized intermediates, such as phenol derivatives and polyhydric alcohols and their ester derivatives.

These gains helped return chemicals to the plus column. So did increased shipments in the catch-all category of industrial inorganic chemicals. In general, these also are commodity products where international competitiveness is determined by plant size and/or supply availabilities; in some cases, like soda ash and other chloralkalis, U.S. producers have an advantage over their Japanese competitors because of lower energy costs. What really made the difference between a so-so year for chemical exports in 1984 and a good year, however, was the rebound in sales of uranium and thorium compounds, which are used primarily as catalysts and reagents in medical research and diagnostic procedures. With shipments back to their 1982 level, total exports of chemicals went up 19.3 percent to $1.5 billion.

Lower-priced energy supplies plus raw material cost-containment efforts also got Japan's paper and paperboard industry back on track last year. But the cap on raw material costs was again achieved largely through the replacement of wood chips by recycled waste paper, which now provides roughly half of the raw material requirements of both paper and paperboard makers. By itself, this substitution meant no shipment growth for U.S. chip exporters. In addition, American producers of softwood chips lost some sales to Australian exporters of hardwood chips because of the continuing shift in Japanese production from kraft and other brown papers to white papers, particularly specialty grades. Market developments, however, were not entirely bleak for this country's exporters of paper base stocks. Pulp suppliers picked up business in the flat Japanese import market that normally would have gone to Canada when mills in British Columbia went on strike for several months. This windfall lifted sales of paper base stocks 8.5 percent to over $0.5 billion.

American coal exporters were not so fortunate. True, larger orders from all major domestic steel users except the civil engineering sector boosted Japanese steel production in 1984 for the first time in five years, but this rebound failed to reverse the slide in U.S. coking coal shipments. To start with, coal consumption did not increase in step with steel production, in large part because electric furnace operators provided one-fifth of the added output but also because of continuing technical improvements in the production process for both coke and pig iron. More importantly, Japanese steel mills again had a glut of coking coal under long-term contract from mines in Australia and

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Canada. With deliveries starting in 1984 from several new Canadian projects, the industry had little choice but to trim purchases from its swing supplier, the United States. American producers therefore ended up with just 22 percent of Japan's record volume of coking coal imports -- the same share supplied by Canadian companies, which shipped 50 percent more coal to steel mills in 1984, and half of Australia's share. And that was not the end of the bad news for U.S. coal exporters. Since Japanese electric utilities were also heavily overcommitted on long-term steam coal deliveries from Australia, they cut purchases from this country. The bottom line for the American coal industry was that exports to Japan fell 13.6 percent last year to under $0.9 billion.

U.S. exporters of logs and lumber found themselves in a similar bind. Japanese residential construction finally rallied in 1984, ending a five-year decline, but this did not translate into extra business for sawmills, either domestic or foreign. Aside from the fact that building starts were still running about a fifth below the level of the late 1970s, the long-term trend toward proportionately fewer wooden housing units and smaller average floor space remained at work. American log suppliers faced an additional sales constraint: Japanese wholesalers and sawmills entered 1984 with above-normal stocks of North American softwood logs. Inventories were worked down during the year by limiting purchases from U.S. producers. This adjustment, it turned out, was the least of the Pacific Northwest's export problems. American forest products companies also lost share in the contracting Japanese imported softwood log market to their British Columbian competitors, which had supplies that had to be moved regardless of the price. For U.S. log and lumber exporters, these developments added up to only one thing -- a 6.6 percent sales drop to $0.8 billion-plus.

The recovery of Japan's basic industries last year largely bypassed one key sector -- petroleum refining. Fuel oil production did inch up, largely because of robust sales of gasoline and kerosene, but the output of heavy (residual) fuel oil continued to drop, pulled down by declining demand from electric utilities and industrial customers. This reduction left the country short on some types of products, particularly bunker fuel used in coastal shipping. California refineries, which have profited from the recent problems of their Japanese counterparts, again stepped in, expanding shipments of heavy fuel oil. Although exports of light (distillate) fuel oil and petroleum coke were both off as a result of the lower energy requirements of industry and power companies, U.S. sales of petroleum products still increased 6.8 percent to just under $0.7 billion.

Food and Feed - Japan generally proved to be a better market for U.S. agricultural commodities in 1984 than analysts and traders expected. Corn was the main surprise. Forecasters had predicted that shipments would drop based on projections of less corn usage in Japanese production of commercially mixed livestock and poultry feed -- the end use for about three-fourths of corn deliveries -- and little pickup in sales of corn for manufacturing sweeteners, starch and other processed products. They were on target on the first score but off base on the second.

Although slightly weaker prices for eggs, milk, chicken, pork and beef plus a small increase in average retail feed prices put some pressure on livestock and poultry producers' profits in 1984, Japanese formula feed demand remained on the upswing, extending a rally that had started two years before. This boosted feed production to a new high, but in a repeat of 1982, relative prices favored greater use of ingredients other than corn. Sorghum was the big winner this time around, not only providing the extra volume to expand output but also replacing the surplus rice that had been a major component of compound feed in both 1982 and 1983. Moreover, as part of a cost-cutting campaign dating back to mid-1983, feed millers continued to substitute less expensive sorghum for some higher-priced corn.

This switch pushed the corn content of Japanese feed steadily down during the year and seemed to eliminate any chance that U.S. exporters would duplicate their record-breaking 1983 performance. What changed these odds was South Africa's drought-triggered absence from the international grain market. With limited supplies available in other corn-exporting countries, the United States, which provides virtually all of Japan's feed corn requirements, took over the country's industrial corn trade -- a business normally shared with South Africa. This break turned 1984 into a banner year for corn exports after all, as sales jumped 13.5 percent to $2 billion.

While commodity analysts and traders missed the mark on corn shipments, they correctly anticipated a decline in soybean exports from 1983's record level. Japanese oilseed processors carried all-time-high soybean stocks into 1984, partly due to overbuying in the wake of the 1983 U.S. drought and also because of a slowdown in the crush that fall as higher U.S. soybean prices began to dampen demand for soybean meal in commercially prepared feed. Carryover meal inventories were also extremely high. Under normal conditions, an expansion in feed production like 1984's increase would have helped work down stocks of soybean meal -- the main protein meal ingredient in feed -- and encouraged stepped-up crushing, but this scenario did not pan out last year.

For most of 1984, relative protein meal prices favored greater use of fish meal at the expense of more soybean meal; rapeseed meal was also attractively priced until mid-year. Although soybean meal regained the price advantage from rapeseed meal in the year's second half, feed millers continued to cut soybean meal mixing in an effort to minimize costs. As a result of this adjustment, which dropped the soybean meal content of Japanese formula feed to its lowest level in ten years, only a small dent was made in the glut of soybean meal held by crushers. With consumption of food-grade soybeans flat, the oilseed processing industry's reduced demand for soybeans translated into smaller U.S. shipments. Sales were off just 3.1 percent to slightly under $1.2 billion, however, since export prices jumped again.

Capital Goods - Robust business spending on plant and equipment was the one bright spot in Japan's otherwise lackluster domestic economic performance during 1984. Centered in the electronics industry, where manufacturers of industrial and consumer products alike poured money into capacity expansion, as well as in the motor vehicles sector (modernization) and the chemicals field (diversification), the investment boom provided additional market opportunities for U.S. makers of high technology products. Measuring and testing equipment, medical apparatus, semiconductor production and assembly equipment, integrated circuits -- sales were up almost across the board.

The continuing rapid pace of factory and office automation in Japan made American producers of data processing equipment the biggest winners, boosting their exports 27.2 percent to nearly $1.2 billion. About half of this gain represented increased sales of systems, which ranged all the way from personal computers up to supercomputers, and add-on peripherals. The other half reflected larger shipments of parts going to the Japanese manufacturing subsidiaries or affiliates of U.S. computer makers, particularly, it appeared, International Business Machines Corp.'s local unit, which manufactures most of the computer giant's line of large-capacity mainframes as well as some of its medium-capacity models.

The major exception to the picture of expanding sales of high technology products was commercial aircraft -- always a volatile export, but the 35.1 percent drop in deliveries to just over $0.5 billion was more a question of the type of plane purchased than the number bought. All together, Japanese airlines took delivery of ten passenger jet transports, only two fewer than in 1983. Japan Air Lines added two of Boeing Co.'s 747s to its already big fleet, including a 747-300-SUD for international routes and a slightly smaller 747 SR for domestic use. For its part, All Nippon Airways, Japan's major domestic carrier, put seven more 767s into service, bringing its fleet of Boeing's latest generation of widebody medium-range planes to 13. In addition, Nippon Cargo Airlines, a new carrier awaiting approval to start freight service between Japan and the United States, took delivery of its first 747-200F.

Consumer Goods - The gain in sales of consumer goods was rather surprising considering the fact that U.S. manufacturers had to overcome the twin obstacles of sluggish Japanese consumer spending and a strengthening dollar. What made the expansion even more remarkable was that pharmaceutical sales increased by a smaller margin than in 1983, advancing just 5.1 percent to a little less than $0.6 billion. To some extent, this slowdown was indicative of the general pause in Japan's pharmaceutical business as drug makers, foreign and domestic, adjusted to the government's new prescription reimbursement policies. It also reflected continuing weak demand for older-generation products, particularly antibiotics -- the mainstay of U.S. exports, and the growing competitiveness of Japanese companies in newer-generation drugs.

Export Prospects

Even more than last year, manufactured goods will have to carry exports to Japan in 1985 since sales of big-ticket raw materials -- coal, logs, corn and soybeans -- will be lucky to match 1984's tallies. Current forecasts of more balanced economic growth in Japan this year and some rise in the yen's value signal relatively good prospects for American-made capital goods, consumer products and other manufactures, including chemicals. How much exports of these products increase, though, could turn on Tokyo's ability to persuade Japanese businessmen and consumers to alter their buying practices.

For further information, contact Susan MacKnight.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

U.S. Exports to Japan, by Commodity, 1983 and 1984

(in millions of dollars and indicated quantity units)

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Total Exports			$21,894.3	$23,575.0	7.7%	10.8%
Industrial Supplies			8,733.6	9,139.2	4.6	14.8
Bituminous Coal	17,863,672 stn	16,324,191 stn	1,002.0	865.4	-13.6	21.2
Coking Coal	16,122,384 stn	15,498,931 stn	919.9	829.8	-9.8	27.8
Steam Coal	1,741,288 stn	825,260 stn	82.1	35.7	-56.5	3.2
Petroleum Products			639.4	683.1	6.8	15.9
Light Fuel Oils	4,936,624 bbl	3,175,817 bbl	158.8	102.6	-35.4	19.7
Heavy Fuel Oils	10,694,435 bbl	13,579,993 bbl	276.7	369.2	33.4	20.5
Lubricating Oils			25.4	25.8	1.6	4.5
Petroleum Coke (excl. calcined)	3,557,732 stn	3,056,909 stn	130.6	120.1	-8.0	27.1
Natural Gas	54,124,064 mcf	55,618,275 mcf	266.8	262.3	-1.7	99.7
Propane	3,158,108 bbl	0 bbl	68.4	0.0	-100.0	0.0
Nuclear Reactor Fuels			151.8	144.1	-5.1	34.8
Logs and Lumber	2,658,823 mbf	2,361,936 mbf	899.7	840.5	-6.6	41.2
Douglas-fir Logs	1,094,147 mbf	914,927 mbf	332.3	325.6	-2.0	60.3
Western Hemlock Logs	704,951 mbf	631,475 mbf	239.4	199.1	-16.8	58.9
Lumber	631,480 mbf	602,198 mbf	208.8	199.5	-4.5	24.3
Paper Base Stocks			479.0	519.9	8.5	24.9
Wood Chips	2,288,133 stn	2,191,675 stn	157.0	156.6	-0.3	95.5
Wood Pulp	716,996 stn	737,697 stn	292.2	327.2	12.0	20.9
Waste Paper	266,163 stn	308,615 stn	28.8	35.4	22.9	8.7
Paper and Paper Products			285.4	290.0	1.6	11.8
Newsprint	181,141 stn	182,620 stn	82.9	86.8	4.7	64.8
Kraft Linerboard	189,494 stn	164,727 stn	53.2	50.5	-5.1	8.0
Coated Container Base Stock	135,490 stn	130,004 stn	98.3	90.4	-8.0	45.4
Chemicals (excl. plastics, fertilizers and insecticides)			1,288.5	1,536.8	19.3	14.1
Cyclic Hydrocarbons			88.3	80.6	-8.7	11.3
Styrene	83,179 stn	84,558 stn	44.4	46.7	5.2	14.1
Para-xylene	18,293,678 gal	18,866,799 gal	32.1	32.0	-0.3	14.1
Cyclic Organic Intermediate Chemical Compounds			117.8	142.8	21.2	11.7
Alcohols, Phenols and Their Derivatives	37,384 stn	27,500 stn	37.6	40.9	8.8	30.7
Nitrogren Function Compounds and Their Derivatives	21,630 stn	23,579 stn	29.6	30.2	2.0	22.2
Acyclic Organic Chemical Compounds			336.8	340.4	1.1	14.7
Ethylene Dichloride	300,517 stn	247,659 stn	66.7	52.3	-21.6	64.6
Ethylene Glycol	88,326 stn	78,719 stn	28.7	28.6	-0.3	20.6
Acrylonitrile	103,903 stn	89,096 stn	50.8	42.5	-16.3	16.7
Uranium and Thorium Compounds	369 stn	561 stn	268.1	437.7	63.3	48.8
Sodium Compounds			43.8	49.2	12.3	8.7
Color Lakes and Toners, Dyes and Paints			30.1	31.4	4.3	6.6
Antiknock Compounds and Additives for Lubricating Oils			64.5	68.1	5.6	9.2
Compound Catalysts (excl. nickel)			30.8	25.3	-17.9	11.5
Plastic and Synthetic Resin Compounds			330.8	356.5	7.8	9.6
Polyamide Resins	11,346 stn	14,798 stn	21.5	25.3	17.7	37.1
Polyester Resins	10,015 stn	12,276 stn	21.2	24.6	16.0	23.5
Poly and Copolymerization Type Thermoplastic Resins	31,704 stn	26,546 stn	71.1	66.0	-7.2	27.3
Film, Strips and Sheets			46.7	45.7	-2.1	6.8
Synthetic Rubber			46.7	56.9	21.8	9.1

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Fertilizers and Insecticides			$ 279.1	$ 297.7	6.7%	7.1%
Crude Phosphates	1,684,892 stn	1,404,789 stn	63.1	50.8	-19.5	13.0
Fertilizers			110.1	122.2	11.0	6.7
Diammonium Phosphate Fertilizers	489,961 stn	538,275 stn	75.2	92.2	22.6	7.7
Unmixed Pesticides			48.9	44.1	-9.8	5.5
Manufactured Pesticides			57.0	65.4	14.7	9.2
Still X-Ray Film	40,044,939 sft	55,385,712 sft	31.0	38.9	25.5	27.4
Photosensitive Papers			28.5	29.2	2.5	9.4
Steel Scrap	2,599,386 stn	2,680,038 stn	218.3	264.9	21.3	28.9
Nonferrous Ores and Scrap			308.8	363.8	17.8	24.1
Copper Ore	32,330 stn	62,004 stn	32.6	63.7	95.4	93.5
Copper Scrap	21,588 stn	47,779 stn	23.3	49.7	113.3	22.8
Aluminum Scrap	233,110 stn	188,051 stn	202.5	184.3	-9.0	66.8
Molybdenum Ore	2,265 stn	3,448 stn	17.7	26.0	46.9	10.7
Unwrought Copper	8,031 stn	78,567 stn	12.5	107.5	760.0	74.6
Aluminum Ingot	279,184 stn	154,011 stn	355.1	209.9	-40.9	52.9
Unwrought Magnesium	12,758 stn	12,042 stn	28.3	28.9	2.1	23.9
Silicon	1,283 stn	1,764 stn	13.2	29.7	125.0	33.6
Silver	4,436,696 toz	4,284,194 toz	51.6	35.5	-31.2	36.4
Platinum and Platinum Group Metals	169,779 toz	234,766 toz	54.3	67.0	23.4	44.2
Gold	95,897 toz	38,722 toz	39.5	10.9	-72.4	0.6
Iron and Steel (incl. ferroalloys)			41.5	63.1	52.0	4.7
Tube and Pipe Fittings			19.8	28.0	41.4	11.4
Unmanufactured Nonmetallic Minerals			92.4	100.4	8.7	13.3
Kaolin Clay	415,450 stn	468,450 stn	53.1	61.7	16.2	36.3
Manufactured Mineral Supplies			80.0	108.7	35.9	7.6
Glass (excl. automotive and mirror glass)			21.6	29.3	35.6	8.4
Industrial Textile Fibers, Yarns and Fabric			63.5	67.5	6.3	2.7
Synthetic Fibers and Manmade-Fiber Yarns			28.0	32.2	15.0	2.8
Raw Cotton	1,394,164 rba	1,588,117 rba	499.9	605.1	21.0	24.8
Whole Cattle Hides	6,388,331 pc	7,333,641 pc	224.1	305.0	36.1	28.6
Leaf Tobacco	57,084 stn	46,058 stn	338.5	286.0	-15.5	22.4
Food and Feed			5,554.7	5,929.2	6.7	18.8
Corn (excl. seed and popcorn)	513,647,090 bu	537,086,560 bu	1,753.3	1,990.2	13.5	28.5
Sorghum (excl. seed)	25,348,775 bu	87,897,756 bu	84.1	269.1	220.0	31.8
Soybeans (excl. seed)	167,198,266 bu	152,067,433 bu	1,209.4	1,171.7	-3.1	21.6
Animal Feeds			158.6	172.7	8.9	7.8
Dried Beet Pulp	402,155 stn	444,437 stn	51.4	58.2	13.2	90.3
Alfalfa Meal and Cubes			66.6	60.3	-9.5	88.3
Wheat	127,308,710 bu	124,086,660 bu	589.3	534.5	-9.3	8.3
Barley	13,923,571 bu	16,565,372 bu	37.4	46.7	24.9	17.9
Fruits and Vegetables			418.8	452.6	8.1	18.6
Lemons	132,459 stn	132,380 stn	74.2	80.4	8.4	86.3
Grapefruit	185,786 stn	159,517 stn	59.7	51.4	-13.9	56.1
Oranges and Tangerines	98,967 stn	96,203 stn	51.9	62.0	19.5	28.9
Almonds			43.5	48.3	11.0	15.3
Frozen Vegetables			61.7	59.5	-3.6	59.2
Frozen French Fried Potatoes	41,061 stn	47,393 stn	29.4	30.9	5.1	76.7
Meat and Meat Products			574.2	571.0	-0.6	47.3
Fresh and Frozen Beef	65,743 stn	85,578 stn	253.5	322.2	27.1	71.4
Fresh and Frozen Beef Offals	37,065 stn	38,072 stn	84.0	76.9	-8.5	33.4
Fresh and Frozen Pork	37,696 stn	20,845 stn	118.0	62.1	-47.4	64.1
Fresh and Frozen Poultry	72,947 stn	57,647 stn	91.5	74.6	-18.5	29.6

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Fish and Fish Products			$ 505.9	$ 502.9	-0.6%	59.2%
Fresh and Frozen Whole Salmon	94,583 stn	84,910 stn	287.9	261.5	-9.2	76.7
Fresh and Frozen Whole Herring	41,700 stn	33,154 stn	52.7	42.9	-18.6	86.2
Fish Roe	12,461 stn	15,196 stn	83.2	81.4	-2.2	90.4
Frozen Snow Crab	6,074 stn	5,911 stn	30.7	24.3	-20.8	84.9
Capital Goods			5,116.4	5,626.6	10.0	6.1
Nonelectric Machinery			2,936.4	3,458.5	17.8	7.6
Data Processing Equipment			916.6	1,166.2	27.2	8.2
Computers			236.0	296.6	25.7	9.8
Peripheral Equipment and Parts			596.5	760.2	27.4	7.4
Disk and Tape Storage Units			71.6	85.3	19.1	6.6
Terminals			37.9	45.2	19.3	4.7
Parts			387.1	484.5	25.2	7.7
Magnetic Computer Disks and Tapes			23.9	28.9	20.9	10.0
Semiconductor Production and Assembly Equipment and Parts			203.3	351.6	72.9	30.1
Measuring, Testing and Controlling Instruments and Parts			485.8	539.1	11.0	11.2
Industrial Process-Type Instruments and Parts			37.4	56.1	50.0	7.9
Chemical Analysis Equipment and Parts			45.4	51.5	13.4	10.9
Physical Analysis Equipment and Parts			54.4	55.6	2.2	12.9
Equipment for Testing Electrical, Radio and Communications Circuits and Parts			174.7	191.6	9.7	15.2
Instruments for Measuring or Checking Electrical Quantities and Parts			41.6	42.2	1.4	17.3
Scientific, Professional and Medical Equipment			225.5	247.1	9.6	12.0
Electromedical and Electrotherapeutic Apparatus and Parts (excl. X-ray equipment)			97.6	110.6	13.3	13.4
Medical Equipment Based on X-Rays and Parts			32.5	32.3	-0.6	13.5
Other Medical, Dental and Surgical Instruments and Parts			80.2	86.4	7.7	11.1
Power Generating Equipment (excl. aircraft and automotive engines)			251.2	307.5	22.4	13.5
Auxiliary Plant for Steam and Other Vapor Generating Boilers			68.1	85.1	25.0	84.9
Gas Turbines and Parts for Mechanical Drives			87.1	123.0	41.2	20.4
Nuclear Reactors and Parts			26.7	11.7	-56.2	17.0
Nonfarm Tractors, Parts and Attachments			32.2	45.3	40.7	2.7
Excavating and Paving Machinery			36.9	29.2	-20.9	2.0
Parts and Accessories for Oil and Gas Field Drilling Equipment			84.7	63.5	-25.0	2.9
Machine Tools and Parts			50.2	56.1	11.8	7.8
Commercial and Industrial Heating and Cooling Equipment and Parts			42.4	46.3	9.2	5.7
Pumps and Compressors			54.1	45.8	-15.3	3.1
Filtering and Purifying Machinery and Parts			50.4	39.5	-21.6	7.9
Taps, Cocks, Valves and Similar Devices and Parts			34.9	35.4	1.4	5.3
Equipment for Service Industries			113.6	111.3	-2.0	5.6
Electric Machinery			713.2	874.9	22.7	5.9
Semiconductors			261.0	361.5	38.5	6.8
Integrated Circuits			200.4	253.7	26.6	18.2
Linear Integrated Circuits	35,366,316 ut	75,508,374 ut	44.9	81.8	82.2	29.7
Chips, Dice and Wafers			29.9	69.2	131.4	2.4

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Exports 1984
Radar Apparatus (excl. for planes and boats) and Parts			$ 70.0	$ 63.5	-9.3%	14.4%
Generators, Transformers and Accessories			73.3	92.3	25.9	5.5
Connectors			45.0	57.4	27.6	14.6
Terminals and Electrical Splicers			25.4	27.0	6.3	13.1
Transportation Equipment			1,466.7	1,293.2	-11.8	4.0
Civilian Aircraft			834.8	541.4	-35.1	13.1
Passenger, Cargo and Combination Jet Transports	12 ut	10 ut	708.0	461.1	-34.9	14.3
General Aviation Planes and Helicopters	43 ut	43 ut	36.8	19.3	-47.6	4.0
Used or Rebuilt Airplanes	5 ut	8 ut	41.2	42.8	5.9	14.6
Civilian Aircraft Engines, Parts and Accessories			361.0	437.5	21.2	7.8
Jet Turbines			33.1	56.0	69.2	5.5
Jet Engine Parts			90.7	158.6	74.9	10.1
Railway Equipment, Parts and Accessories			45.4	55.7	22.7	9.0
Parts for Rolling Stock			34.1	43.2	26.7	46.5
New Cars	2,322 ut	2,044 ut	31.2	29.5	-5.4	0.6
Automotive Parts, Engines and Bodies			144.5	180.2	24.7	1.4
Consumer Goods			1,394.4	1,475.5	5.8	11.1
Pharmaceuticals			543.8	571.8	5.1	20.6
Bulk Antibiotics			146.8	163.8	11.6	24.0
Packaged Vitamins			28.1	31.5	12.1	35.2
Blood and Blood Derivatives			138.9	146.3	5.3	44.7
Cigarettes	273,473,150 pk	315,258,900 pk	80.4	95.4	18.7	8.5
Electric Household Appliances			37.2	50.6	36.0	4.2
Stainless Steel Cooking and Kitchenware			67.5	77.1	14.2	85.0
Toys and Sporting Goods			117.2	90.6	-22.7	10.9
Golf Equipment			62.5	43.2	-30.9	42.6
Still Film in Cartridges and Rolls	51,572,726 ut	44,567,790 ut	72.7	64.0	-12.0	21.3
Nonwoven Fabrics of Manmade Fibers			23.1	33.6	45.5	23.6
Clothing			44.2	43.1	-2.5	5.3
Footwear			17.5	37.5	114.3	33.6
Gem Diamonds and Other Gem Stones			64.1	56.3	-12.2	13.5
Works of Art			24.1	34.3	42.3	11.7
Printed Material			54.8	66.0	20.4	4.7
Miscellaneous			1,095.3	1,404.5	28.2	7.5
Military-Type Goods			293.8	401.6	36.7	8.1
Other Domestic Exports			426.8	521.6	22.2	6.6
Military Aircraft Engine Parts			344.0	326.3	-5.1	12.4
Re-exports			374.7	481.3	28.4	8.3

Key to quantity abbreviations:

bbl = barrels
bu = bushels
gal = gallons
lb = pounds
mbf = thousand board feet
mcf = thousand cubic feet
pc = pieces
pk = packs
rba = running bales
sft = square feet
stn = short tons
toz = troy ounces
ut = units

Source: U.S. Department of Commerce, U.S. Exports: Schedule E Commodity by Country (FT 410), December 1983 and December 1984.

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Japan Reduces Telecommunications Equipment Standards

In what U.S. negotiators termed a surprising move, Tokyo has agreed to eliminate many of the technical standards for customer-premise equipment, often called telecommunications terminal equipment. The decision has impressed both government and industry observers. According to U.S. negotiators, "equity will exist in the regulatory process," and an industry association official told the press he now expects sales of American equipment to increase ten-fold. Ministry of Posts and Telecommunications (MPT) officials dropped the voice quality and signal strength standards in an effort to settle one of the high-visibility issues straining bilateral relations.

Of the 30 technical items distributed among 20 articles, MPT has agreed to delete all of nine and part of one in the following areas:

- Answering functions, including strength and length of ring.

Miyazawa plan could indicate not only a shift in attitudes toward economic policies, but also toward the LDP leadership.

Michael Chinworth

Japanese Workers Harvest Higher Wages from Spring Negotiations

A true sign of spring in Japan is the annual round of industry-wide wage negotiations. This year's shunto (spring offensive) has yielded higher wage offers than 1984's, not surprising given the strong growth of corporate profits and productivity over the past year. Government and private analysts have watched the negotiations with particular interest because of their effect on consumer spending -- the largest component of domestic demand and the sector where growth has been disappointingly sluggish (see JEI Report No. 12B, March 29, 1985).

The wage drive actually begins in December when the major Japanese unions arrive at a target figure for wage increases. The Sohyo (General Council of Labor Unions), Domei (Confederation of Labor), Shin Sanbetsu (Congress of Industrial Unions) and Churitsu-Roren (Federation of Independent Unions) set an average 7 percent increase as their 1985 goal. Many union members sought an even bigger hike as the opening position, citing the 15 percent-plus growth of corporate profits in 1984. The 7 percent level was adopted, however, because it was said to be more "realistic." The unions have taken a beating in the past when they have championed large increases.

Management staked out its opening position a month later as Keidanren (Federation of Economic Organizations) and Nikkeiren (Japan Federation of Employers' Associations) issued the annual reports on business conditions that form the foundation for wage offers. In a somewhat unusual move, many firms hedged their statements regarding initial wage offers, concentrating instead on the fragile nature of the recovery due to its reliance on foreign trade. Similarly, they argued that competition from South Korea, Taiwan and Hong Kong, as well as China and Brazil, required continued wage moderation. Nevertheless, industry realized that this was not the time to be miserly when profits were high and consumer demand weak. Moreover, the government favored heftier wage hikes to boost domestic demand and relieve some of the pressure for stimulative fiscal policy.

As the two-month negotiations got underway at the beginning of April, it was quickly clear that this would be a much better year for labor than 1984. The pace-setting unions -- those representing workers in the steel, railroad, automotive and electric machinery industries -- received significantly higher offers. The five major steel makers offered an average 3.87 percent increase compared with 3.11 percent last year, translating into a Y9,000 ($36 at Y250=$1.00) jump in monthly pay; private railway workers accepted a 5.64 percent increase after rejecting an initial offer of 5.42 percent; Toyota Motor Corp.'s 5.53 percent raise and Nissan Motor Co., Ltd.'s 5.4 percent bid were nearly half a percentage point above 1984's settlements; and fourteen major electric machinery firms offered increases of 5.5 percent, 0.8 percentage point above 1984's raises.

The pattern of increases runs across all industries; even the chronically depressed shipbuilding and paper companies improved their offers over last year (see table). The strength of the high technology sector is evident from offers by its component industries. The outlook for an overall average increase above 5 percent is strong, compared with 4.54 percent last year.

Improved wages will undoubtedly help spur consumer spending and strengthen domestic demand. In turn, demand for imports is expected to increase and the economy's dependence on exports will be reduced. The residential housing and retail sectors, two areas highly sensitive to consumer moods, have reported improved business conditions and are increasingly optimistic. A revival of consumer spending would be welcome news, especially to fiscal authorities.

Jon Choy

Japanese Wage Offers for 1985*

(average monthly wage increase in yen)

Industry	1985		New Monthly Standard Wage	1984	
All Companies	Y10,859	5.08%	Y213,424	Y9,359	4.54%
Large Companies	10,868	5.08	213,598	9,358	4.53
Small Companies	9,944	5.10	194,687	9,504	4.87
Energy	11,350	4.82	235,494	10,037	4.33%
Metals	8,950	3.93	227,428	6,998	3.21
Electronics/Electrical	10,684	5.46	195,660	9,543	4.99
Information	12,511	5.64	221,557	13,264	5.41
Machinery	11,366	5.25	216,345	9,878	4.74
Motor Vehicles	10,934	5.43	201,203	9,331	4.83
Shipbuilding/Defense	9,006	4.00	225,042	7,037	3.23
Chemicals	10,920	4.68	233,103	10,415	4.63
Textiles/Paper	10,124	5.21	193,991	8,531	4.53
Food	10,500	4.70	223,026	10,380	4.77
Transportation	11,395	4.86	234,319	10,126	4.51
Services/Leisure	11,689	5.35	218,188	10,618	5.22
Housing/Construction	10,766	4.88	220,512	9,454	4.65
Consumer Retailing	9,970	5.28	188,836	8,755	4.67

*Based on offers and settlements by 782 companies as of April 12, 1985.

Source: Nihon Keizai Shimbun, April 17, 1985.

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The views expressed in this report are those of the authors and do not necessarily represent those of the Japan Economic Institue.

STATISTICAL SUPPLEMENT

Trade and Payments Data
(in millions of dollars unless otherwise indicated)

	1983	1984	January-March 1984	January-March 1985	January 1985	February 1985	March 1985
Japan's Balance of Payments							
Trade Balance	$31,454	$44,351*	$7,593	$8,957*	$1,455*	$3,322*	$4,180*
Exports (f.o.b.)	145,468	168,268*	38,596	38,099*	10,969*	12,742*	14,388*
Imports (f.o.b.)	114,014	123,917*	31,003	29,142*	9,514*	9,420*	10,208*
Current Account Balance	20,799	35,024*	4,806	6,794*	800*	2,539*	3,455*
Long-Term Capital (net)	-17,700	-49,832*	-5,809	-10,596*	-3,322*	-2,206*	-5,068*
Overall Balance	5,177	-15,200	-3,070	-2,414	-2,368	143	-189
International Reserves (end of period)	24,496	26,313	25,109	26,538	26,539	26,244	26,538
Japan's Customs Clearance Trade							
Trade Balance	20,534	33,611	4,543	5,999*	462	2,367	3,170*
Exports (f.o.b.)	146,928	170,114	39,013	38,485*	11,059	12,923	14,503*
Cars	19,535	21,899	4,789	4,561*	1,675	1,564	1,321*
Steel	12,843	13,852	3,200	3,269*	929	1,022	1,318*
Imports (c.i.f.)	126,393	136,503	34,470	32,486*	10,596	10,557	11,333*
Crude Oil	40,063	39,379	10,854	9,722*	2,881	3,258	3,583*
Japan-U.S. Trade							
Trade Balance	18,181	33,075	5,818	6,571*	1,898	2,330	2,343*
Exports (f.o.b.)	42,829	59,937	12,501	13,341*	4,102	4,558	4,681*
Imports (c.i.f.)	24,648	26,862	6,684	6,770*	2,204	2,228	2,338*
Yen-Dollar Exchange Rate							
Tokyo Spot Market (end of period)	Y232.20	Y251.10	---	---	Y254.65	Y259.90	Y252.50
U.S.-Japan Trade							
Trade Balance	-19,289	-33,560	-7,311	-10,241	-3,869	-2,976	-3,396
Exports (f.a.s.)	21,894	23,575	5,695	6,252	2,100	1,824	2,328
Industrial Supplies	8,734	9,139	2,225	2,435	794	731	910
Food and Feed	5,555	5,929	1,477	1,214	479	359	376
Capital Goods	5,116	5,627	1,336	1,736	541	485	710
Consumer Goods	1,394	1,476	355	368	119	109	140
Imports (Customs)	41,183	57,135	13,006	16,493	5,969	4,800	5,724
Automotive Products	14,919	18,477	4,207	5,381	1,839	1,791	1,751
Industrial Supplies	5,391	7,276	1,779	1,866	668	556	642
Consumer Goods	8,296	11,266	2,517	3,449	1,336	867	1,246
Capital Goods	11,896	19,290	4,295	5,529	2,035	1,508	1,986

*Preliminary

STATISTICAL SUPPLEMENT

Japanese Economic Indicators

(percentage change from year-earlier period unless otherwise indicated)

	1983	1984	January-February 1984	January-February 1985	December 1984	January 1985	February 1985
Discount Rate (end of period)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Outstanding Money Supply	7.4%	7.8%	7.7%	7.9%	7.8%	7.9%	7.9%
Industrial Production	3.6%	11.1%	11.5%	7.2%	8.9%	8.6%	5.8%
Manufacturing Operating Rate	1.6%	8.4%	10.0%	3.9%	4.4%	4.8%	3.1%
Number of Bankruptcies	11.9%	8.8%	21.1%	-7.4%	1.2%	-0.8%	-13.4%
Residential Construction Starts	-0.8%	4.4%	-4.3%	7.7%*	5.0%	9.9%	6.0%*
Job Openings to Applications (ratio)	0.60	0.65	0.64	0.69	0.66	0.69	0.68
Nominal Wages	3.5%	4.5%	3.6%	4.0%*	4.3%	4.7%	3.3%*
Labor Productivity	4.5%	10.0%	n.a.	n.a.	n.a.	n.a.	n.a.
Wholesale Prices	-2.2%	-0.3%	-1.3%	0.7%	0.4%	0.7%	0.8%
Consumer Prices	1.9%	2.2%	2.4%	2.2%	2.6%	2.9%	1.4%
Yen-Based Export Prices	-6.0%	0.6%	-0.6%	4.0%	2.7%	3.8%	4.2%
Yen-Based Import Prices	-7.8%	-3.4%	-6.7%	2.3%	0.1%	1.7%	2.9%

*Preliminary

For Japan's most recent GNP figures, see JEI Report No. 12B, March 29, 1985.

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JAPANESE DEFENSE: OUT OF THE CLOSET

Summary

One aspect of U.S.-Japan relations that has proceeded with few disruptions or open controversies over the last two years is defense cooperation, enabling policymakers in Japan to proceed with military buildup plans in relative calm. The absence of overt pressure from the United States to accelerate defense spending has helped diminish hostile reactions from the Japanese public and contributed to a steady consolidation of public opinion behind most of the government's defense thrust.

As a result, 1984 was not particularly noteworthy in this context. Once again, defense spending increased at a higher level than most budget categories. Although the rise was accompanied by the usual opposition from defense opponents, it was promptly approved by the Diet and put into effect. Bilateral consultations on military technology transfers continued without significant progress, but failed to generate friction. Planning for a revised mid-term defense outline was successfully concluded, preparing the public for the eventual elimination of the long-held one percent of gross national product (GNP) limit on overall defense spending.

The fact that defense played a secondary role in domestic politics and bilateral relations is itself newsworthy, for defense gradually has become a legitimate policy issue in Japan and one less frequently subject to emotional outbursts. The debate is no longer conducted behind closed doors, suggesting that the question of Japan's defense role is about to enter a new phase.

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Developments in 1984

Several unexciting but significant events last year indicate that defense policy is now considered not only legitimate but also essential to Japan's economic and political integrity. The debate over the one-percent spending limit accelerated, but the underlying assumption was that this was an outmoded concept that would have to be replaced with more flexible restraints. A classified bilateral study of sealane defense was completed, a major step in defense planning and cooperation. Japan moved ahead with plans to replace outdated fighters, possibly with a domestically produced aircraft, now dubbed the FSX. Reorganization of the Self-Defense Forces (SDF) was initiated and joint U.S.-Japan defense exercises were expanded and increased. Technology transfer discussions continued and steps were taken to facilitate those exchanges.

A number of event passed unnoticed. Both the *Carl Vinson* and the *Enterprise* made ports of call in 1984. In previous years, the presence of one nuclear carrier would have stirred a political uproar. Moreover, deployment of Tomahawk cruise missiles on U.S. vessels in the region, heavily reported by the media, provoked some demonstrations in Japan but the fuss died out quickly and left no visible side effects.

Two developments illustrated the range of domestic and bilateral considerations during the year and the degree to which the defense debate has progressed in Japan. The first involved the joint sealane study. After a two-year bilateral study, the Japan Defense Agency (JDA) arrived at the basic principles of sealane defense. According to press reports, defense measures would be directed at Soviet naval actions and protection of the three strategic straits in Japanese waters. JDA also called for maximum dependence on Japanese capabilities, although reliance on American support in the region would be necessary given the current strengths of the Maritime Self-Defense Forces (MSDF).

There has been profound concern in both Washington and Tokyo over Japanese strategy for defending these waters since Prime Minister Zenko Suzuki agreed in 1981 to take on this role, and it is still not clear whether Japanese and American perceptions concerning the need for blockading the three critical straits are similar. Would the MSDF, for example, institute a blockade of Soviet vessels if there was a conflict between the United States and the U.S.S.R. in the Indian Ocean? Nevertheless, the two allies did manage to complete at least a basic strategic outline, indicating the degree to which the two countries have come to rely upon one another in regional defense. This development was not heavily publicized, but it was a major stride.

Another controversy involved the use of telecommunications satellites for defense communications. JDA has long sought to use satellites for general communications -- not necessarily for carrying classified messages. Satellite communications are considered particularly important to protect sealanes to 1,000 nautical miles. But even this limited use ran afoul of a 1969 Diet resolution forbidding the use of space for military purposes. Again, the peaceful intentions of Japanese policies collided with the needs of self-defense.

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The situation was resolved in part last March when Japan's Sakura 2 communications satellite was put into service, establishing telephone links between the main islands and Iwo Jima. Furthermore, funds were included in the FY 1985 budget for utilization of the U.S. Navy's Fleet-SatCom system for non-tactical uses. These actions followed a declaration that such utilization would not violate the 1969 resolution. Although actual communications have been enhanced, JDA was more concerned with establishing the principle that it was entitled to use satellites for self-defense purposes.

The next step, some observers suggest, will be for JDA to begin lobbying quietly but persistently for production of a satellite intended solely for JDA communications, then acquisition of an intelligence-gathering satellite. Faced with political constraints, budget restrictions and what one observer calls a "second-class status in the bureaucracy," JDA is not likely to achieve its goal in the near future, but now that the first step has been taken, it is easier to argue for the next phase.

The satellite issue, primarily a domestic concern instead of a bilateral issue, again reflected the more farsighted nature of the defense debate in Japan. Although it received little media attention in the United States, it was a significant Japanese policy issue that has important ramifications for the future. The fact that it was resolved in a politically acceptable manner suggests another significant step in the maturation of defense policies.

One Percent: Down the Drain?

Nowhere is the transition to an active defense posture more evident than in the debate on the one-percent limit. For the last two years, the Japanese government has been so close to the self-imposed spending cap that newspapers have reported weekly on the ratio of the defense budget to GNP. The government was spared confronting the issue in 1984 when the economy grew more rapidly than had been anticipated, giving Tokyo some time to prepare the general public for the inevitable and develop a consensus for a new approach.

Given the present course, the limit will be breached as soon as this summer, but no later than the early fall. (Optimists have noted that economic growth for 1985 is exceeding forecasts, raising the possibility that the government will again avoid the issue.) The same back-door approach that was crafted in 1984 is ready to be implemented for 1985. Civil service salaries will be increased later this year, including the salaries of Japan Defense Agency and Self-Defense Forces personnel. This approach, policymakers feel, is more palatable to voters and makes it easier for politicians to argue for expanded funding.

There is less argument in Japan that greater defense spending levels are necessary. Although there is concern over the pace of the military buildup, voters and politicians alike have gradually accepted the premise that the country faces a growing security threat from the Soviet Union and cannot rely solely upon the United States for protection.

Soviet actions represent direct threats to Japan's physical security. Japan's Air Self-Defense Forces (ASDF) scrambled a record 944 times between April 1984 and March 1985, for example, as Soviet intelligence and combat aircraft probed Japanese air space. The Soviet Union's first deployment of a naval carrier group in the Pacific in 1984 contributed to fears that its actions threaten Japan's physical security and increase the potential that the Soviets intend to achieve political gains through military coercion.

More importantly, the willingness of government officials to state that premise explicitly is growing. The 1984 Defense White Paper, JDA's annual assessment of domestic and international security conditions, is by far the most precise and direct analysis of defense issues since the publication was initiated by then-JDA director-general Yasuhiro Nakasone in 1970. The paper noted that although efforts by the United States and other Western nations have helped stem Soviet influence in Asia, the U.S.S.R. still poses a potential threat to Japanese and regional security. Outlining the steps the Soviets have taken over the last year to consolidate their military influence in the Pacific, the report concluded that additional efforts will be required by Japan to fulfill the goals of the 1976 National Outline on Defense.

The report appeared to be addressing both an international and domestic audience. Comments directed toward the former justified Japan's defense programs, stressed the importance of expanding defense spending to meet JDA goals, and offered reassurance that defense spending would not get out of control. In expressing support for American defense efforts and identifying Japan with the security goals of all the Western nations, for example, the white paper implicitly established a rationale for JDA programs as well. At the same time, it said that the 1976 defense outline inherently limits Japan's defense spending and thus will prevent a military buildup that could concern not only the voters but also the country's Asian neighbors.

The international audience addressed in the white paper is primarily the United States. The report assured Japan's allies that Tokyo will meet its commitments, including, for example, greater resource allocations.

Significantly, the white paper underscored the importance of domestic weapons production, noting its sharp impact on military strategy. It thus endorsed publicly the growing support in Japanese business and policymaking circles for a self-sufficient defense production base, a position that had been urged in the early 1970s by Mr. Nakasone, then JDA's head.

This willingness to articulate defense concepts has also manifested itself in bilateral forums, such as the report of the United States-Japan Advisory Commission released in September 1984. Echoing many of the same thoughts as the JDA white paper, the advisory commission's report concurred on the Soviet threat in Asia and went one step further by declaring that America's security is inexorably linked with Japan's. The report urged that those links be strengthened by joint research and development in defense, a proposal that is being considered seriously in both countries even though it would have sent shivers up collective spines for political reasons only a few years ago.

To help pave the way for the inevitable, Mr. Nakasone organized a private-sector commission to study defense issues when he first took office. The final report of the Kosaka Commission, which was released last December, declared that the one-percent objective is no longer feasible in light of the continued need to expand self-defense. The study was another piece of consensus-building that should enable the government to move to more flexible guidelines governing defense spending policies.

Redefining Limits: Qualitative Not Quantitative

Freed from a strict monetary restraint on defense spending, both critics and supporters of the military in Japan are considering new guidelines that will achieve Tokyo's strategic goals without provoking suspicions of rampant Japanese militarism. This concern has guided thinking behind the revised five-year plan, which is expected to be approved by mid-June at the latest.

Indeed, it is only now that policymakers have been able to focus on concrete qualitative goals and that defense planners have been forced to consider overall military expenditures and the interrelationship of the services. When spending limits were in effect, they provided a convenient excuse to avoid facing issues such as ground force reorganization or the most effective mix of air, ground and sea forces.

The Liberal Democratic Party (LDP) has led the debate to replace the one-percent limit, in effect since 1976. Initial proposals included simply a higher spending limit, perhaps 1.5 or 2 percent of GNP. Other alternatives included a cap on annual budget increases or a spending limit as a percent of gross domestic product instead of gross national product. These approaches, however, have apparently been rejected in favor of policy-oriented controls that would emphasize defense planning rather than spending targets.

It appears that the five-year defense plan will become the mechanism for both defining defense policies and assuring spending restraint. Long-term defense plans are expected to be reviewed periodically, including current cost estimates. Party officials hope that this system will achieve several goals. It will establish the precise aims of Japan's self-defense forces; define appropriate budgetary requirements; develop political and public support for defense programs; and check military expansion.

This shift has contributed to a new definition of Japan's role in the world and in Asia, but it has implications for other issues that could prove to be politically sensitive. Included is the question of constitutional revision. The LDP has completed proposals to re-examine the constitution in light of modern security concerns. Although outright abolition of the famous "no-war" article of Japan's constitution has been proposed at various periods, the LDP favors a more moderate approach that would include giving consideration to Japan's three "non-nuclear principles," creating a non-nuclear zone, prohibiting offensive forces, and pledging not to send forces overseas.

Nevertheless, many defense critics fear that Mr. Nakasone is attempting to move Japan toward the path it once followed. The discussion also has raised eyebrows in the United States. Even some military experts are still leery that Japanese rightists would exploit the situation and advocate a stronger military force. The current debate in Japan has been portrayed by its supporters as an effort to assure civilian rule while eliminating the contradictions contained in Article IX that have hampered the formulation of sensible self-defense policies, but the issue is likely to remain controversial.

The Five-Year Plan: Still Out of Reach

JDA released its preliminary budget request for fiscal year 1985 on June 17, 1984, calling for an 8.5 percent increase over FY 1984's Y2.94 trillion ($11.7 billion at Y250=$1.00) level. Anticipated personnel expenses and equipment needs were given as the principal reasons for the increase, which came under severe scrutiny from the Ministry of Finance and defense opponents. The prime minister came under fire for pressing forward on defense while maintaining constant spending levels in other areas, particularly in sectors that would stimulate the domestic economy, but the Diet approved a 6.9 percent increase.

The new defense budget reflects a sensitivity to many problems unique to the Japanese. Ammunitions budgets, for example, along with other sustainability items, were increased 28 percent above FY 1984 levels. Seventy-three aircraft will be acquired under the plan, and the Patriot surface-to-air missile system will be introduced to replace outdated Nike J systems.

There is an increased emphasis on air and naval defense as opposed to ground forces. Defense experts have criticized the predominance of ground personnel in the SDF, noting that any invasion of Japan must be launched in the air or by sea. These forces, many of whom are well beyond retirement age and are kept on active duty only to avoid even higher pension costs, actually debilitate Japan's self-defense, observers say. Prime Minister Nakasone, a former Navy man, told graduating cadets last March that any invasion of Japan would be "met at sea." Some suspect that Mr. Nakasone is simply demonstrating personal loyalties, but the strategy has been applauded by experts in both the United States and Japan.

Coupled with this shift are plans to reorganize the Ground Self-Defense Forces (GSDF) to provide a more effective defense against the Soviets. These proposals include increasing weapons for units now stationed in Hokkaido and greater air mobility for units stationed in other parts of the country. These plans reflect assessments that Soviet troops positioned off Japan's shores could be used in an invasion to secure the northern straits for passage by Soviet vessels.

These proposals are part of the next mid-term defense plan that is under review by the National Defense Council, a group that includes the prime minister and cabinet members involved in defense issues. Approval of the plan is expected by mid-July at the latest. Among the plan's provisions are:

- Doubling the number of P3C anti-submarine patrol planes to 100, increasing combat ships from 49 to 63, and adding 11 new submarines, bringing the total to 16.
- Additions of anti-tank helicopters for the GSDF.
- Acquisitions of F15 fighters for the ASDF to a total of 190.

Despite these ambitious plans and the budgetary discussions, observers agree that the JDA is incapable of meeting current or even revised defense plans with present levels of funding. Estimates for meeting the goals vary from 1.4 to as much as 2.5 percent of the nation's GNP, using current methods for calculating the balances. In any event, the government is far from meeting the goals of the current five-year plan and is unlikely to achieve its new aims unless spending is increased steadily over the coming years. Political considerations suggest limiting annual increases to perhaps no more than 10 percent. Double-digit hikes could easily provoke anxieties among Japan's Asian neighbors, but that is what many defense specialists insist is necessary to meet current goals, let alone larger plans that they feel are necessary for adequate defense in the event of a serious conflict.

Other factors continue to obstruct planning. The Ministry of Finance, for example, emphasizes -- for political reasons alone, some suggest -- equal financial support of the three military branches, although that stance may be in the process of revision. Sustainability remains poor, observers note. Moreover, considerable ground must be made up before the forces can attain reasonable levels of combat readiness. Many doubt that these problems are sufficiently addressed even in the next five-year program.

The lack of combat readiness was painfully illustrated by a recent exercise involving a simulated defense of Hokkaido by the GSDF against imaginary Soviet invaders. Less than 20 minutes into the exercise, the "Soviet" forces had methodically eliminated Japanese defenses and established a beachhead on the island. Some observers have insinuated that the exercise was intentionally "fixed" by GSDF planners to emphasize the need for additional ground forces and funds. They agree, however, that even if the exercise had been structured differently, the results most likely would have been the same.

Other problems addressed in part by the new program are an imbalance in the MSDF between surface ships and submarines, the integration of missiles and aircraft in the ASDF, and the coordination of civilian and uniformed personnel within JDA. JDA officials are also frustrated that the agency lacks full cabinet status and only now has begun to attract some of Tokyo University's top graduates, a key consideration in developing and maintaining influence in the government. Many of these conditions could be rectified by the end of the next five-year program, if it is sufficiently funded, observers agree. That qualification, however, is the major stumbling block.

Technology Transfers: "Getting Nowhere Fast"

In 1983, the Reagan administration sought to establish the principle of unimpeded transfers of military technologies between the United States and Japan. Prime Minister Nakasone signaled his agreement in principle before his first official visit to the United States in January 1983. Subsequent discussions led to an exchange of notes in November of that year outlining the framework for such exchanges. Since then, however, one technology transfer specialist says that the policy "has been getting nowhere fast."

Delays in facilitating smooth transfers between the two countries were expected on both sides of the Pacific, but have perhaps exceeded expectations. Several problems were expected to be settled in 1984 with the release of a report by a study group of the Defense Science Board and other Department of Defense (DOD) teams that visited Japan, yet this was not the case.

A group of defense experts organized by DOD arrived in Tokyo July 7 to tour laboratories of major corporations and government agencies and review Japanese technical capabilities to open the way for company-to-company transfers of military technologies. Included on its agenda were tours of NEC Corp., Mitsubishi Electric Corp., Sumitomo Electric Industries, Ltd., Hitachi, Ltd., Fujitsu, Ltd., the Ministry of International Trade and Industry (MITI) and JDA's Technical Research and Development Institute.

Later that month, the Defense Science Board released its long-awaited study on dual-use technology transfers. Chaired by Malcolm R. Currie, senior vice president of Hughes Aircraft Co., the study focused on 16 specific technologies in which U.S. companies are interested, including gallium arsenide semiconductors, computer-aided design and voice-recognition systems. By publicly enumerating at least general areas of interest, the report addressed some questions that had emerged during the 1983 technology transfer negotiations.

Certain conclusions that were potentially controversial stimulated surprisingly mild reaction, even after policymakers had examined their implications. Among these was the judgment that production plans would force increased defense spending in Japan and eventually make the country a potential defense exporter. The Currie team concluded, however, that the overriding importance of the alliance is such that "closer technological cooperation outweighs drawbacks of eventual competition." The report noted that although government policies preclude the immediate possibility that Japan will become a defense exporter, it is a long-term and widespread concern to U.S. industry. The Defense Science Board anticipated that Japan would be able to export defense-related products in ten to 15 years.

An emphasis on the Japanese government's role in promoting high technology sectors, Tokyo's drive to develop self-sufficiency in defense production, and the link between commercial and defense projects suggests that competition with Japan is a major concern in the United States. Calls for retaining U.S. technological superiority have furthered this awareness. Although the writers clearly recognized that Japan's capabilities are growing and in many cases exceed U.S. efforts, the document underscored strong, mutual private-sector interest in exploring transfer possibilities.

Many of the limitations outlined in the Currie report, however, will require long-term efforts. For example, the report noted that comprehensive surveys of Japanese technologies were virtually nonexistent. DOD and other government agencies have concluded an assessment of electro-optics, a primary area of Pentagon interest, and this study should be available by the end of May. Other problems, however, including a shortage of Japanese language specialists and fundamental shifts in government and business attitudes, have only begun to be addressed.

One persistent technology transfer problem cited in the Currie report is the U.S. government's continued emphasis on safeguarding sensitive technologies to prevent leaks to unfriendly countries. The Defense and Commerce Departments have been involved in bureaucratic disputes over jurisdictional questions and the degree to which export control policies should restrain transfers to other countries. Those disputes have been resolved on paper, and approval of a new

Export Administration Act should help clarify the situation, but bilateral technology flows are not likely to occur until procedures are more stable and predictable.

DOD officials readily admit to both government and private-sector security concerns and cite them as a major reason for delays. Suspicion about Japanese motives and security are strong in the United States, one specialist notes. "There is institutional momentum to keep all foreigners out, not just Japanese," he concludes. Other problems include the "not-invented-here syndrome," which leads many Americans to reject foreign technologies out of national pride.

Japanese sensitivities, particularly at the policy level, to the possible use of their technologies in American military equipment remain a major stumbling block to transfers as well. Yet another problem has been what some feel is Tokyo's failure to promote transfers. The reasons offered for this vary from MITI's desire to protect vital Japanese technologies for domestic, commercial purposes to fears of being perceived as an arms merchant. Companies hesitate to give away the family jewels just when they feel that can not only compete with the United States, but surpass it in several fields.

DOD officials clearly are relying on the technology transfer agreement to help reduce development costs of new systems, reduce production and deployment lead times and increase inter-operability of U.S. and Japanese systems. Some go so far as to reject the fears expressed by some American businessmen. "Maybe we could stand the competition," says one official who has few illusions about U.S.-Japan cooperation.

Officials in both countries are anxious to alleviate the logjam. Representatives of the Joint Military Technology Commission met for the first time November 6 in Tokyo, and technology transfer specialists from the United States spent nearly three weeks in Japan in April. Meetings later this month and a review of the electro-optics report should help generate some momentum. DOD is placing great emphasis on technology transfer policy, and an increasing number of U.S. specialists are giving more than just lip service to co-development and co-production of a range of next-generation defense systems. But for these policies to be realized, someone has to take the first step and no one seems to be moving at this point.

The Drive Toward Self-Sufficiency

Complicating the situation is Tokyo's own emphasis on attaining the greatest possible degree of self-sufficiency in defense production. The reasons behind the policy, which was reiterated in the 1984 white paper, are varied and, from a Japanese perspective, persuasive. They include:

- The need to fill gaps left in industrial production by declines in shipbuilding and other heavy industries. Private companies and the public sector alike see opportunities in defense production.

- A lurking suspicion of the reliability of the United States as a defender and supplier.

- A realization that in times of conflict, dependence on U.S. supplies cannot be presumed.

- A desire to absorb advanced technologies whenever possible, both for their intrinsic value and to boost civilian industries, particularly aerospace.

The self-sufficiency drive has manifested itself in several areas. The BK-117 helicopter, for example, jointly developed by Kawasaki Heavy Industries, Ltd. and West Germany's Messerschmitt-Boelkow-Blohm, is a notable success in an area where small domestic markets limit the realistic expansion of production. No new helicopter programs are planned in Japan, but the lessons learned under the BK-117 project are available for future reference. Meanwhile, emphasis has shifted to licensed production and maintenance of CH-47 helicopters and retrofits of Sikorsky SH-60Bs, leading some observers to suggest that Japan may eventually decide to develop its own helicopters.

Co-production of F-15s in Japan is another step toward what some analysts see as a drive to develop a domestic fighter from scratch. Considerable U.S. technology has been transfered to Japan under the program. Increasing abilities in this industry segment were demonstrated when the first Kawasaki XT-4 trainer prototype was rolled out April 17. The T-4, powered by Japanese-produced engines, is to be the mainstay of training programs for the ASDF, which is expected to acquire 200 of the aircraft. Its development was spurred by funding from JDA's Technical Research and Development Institute, an increasing force in annual budgets. Significantly, the T-4, developed with sophisticated computer-aided design and manufacturing techniques, will be available for export, the government having determined that the plane does not qualify as a "weapon" and thus is exempt from Japan's ban on weapon exports.

Without a doubt, the project that has come in for the most popular attention at this point is Japan's FSX aircraft program, an effort to replace outdated F-1 and F-4 fighters with a domestically produced plane. Despite American and European pressures to buy a replacement abroad (General Dynamics Corp.'s F-16, the Panavia Toronado and McDonnell Douglas Corp.'s F-18 have all been proposed), JDA is proceeding with its plans to extend the life of its F-4 fighters for the time being and consider alternatives for production of a new jet. These include licensing a foreign design, joint production of an essentially Japanese plane, and a cooperative effort to produce a hybrid configuration.

The FSX program provides considerable opportunities for Japanese manufacturers to expand their aerospace business. Last year, defense-related demand accounted for more than 80 percent of Japan's aerospace sales, partly because of the slump in civilian markets. With uncertainty in this sector expected to continue, the FSX is seen as the best alternative for new, sustained production lines that will carry well into the next decade.

Self-sufficiency has generated controversy in defense policy circles in both countries. U.S. officials, particularly congressmen who are critical of what they see as Japan's "free ride" on defense, feel that MITI's strong role in defense plans and production indicates its desire to absorb technology for commercial purposes. Under the guise of self-defense, they see Japan, Inc. rearing its head again in search of new export markets at U.S. expense. Others lament the unnecessary duplication of effort, the delays in deployment caused by co-production or licensed production rather than off-the-shelf purchases, and the staggering costs of this course.

There are, however, benefits to this approach as well. Inter-operability and extended production lines can be achieved through bilateral cooperation, DOD specialists note, and American suppliers receive royalty payments. But direct purchases are more expedient and practical in defense terms, although not necessarily from a long-term commercial perspective. Significantly, the pragmatic arguments attract many sympathetic ears in JDA.

The Defense-Trade Linkage

With the bilateral trade balance overwhelmingly in Japan's favor, there is some pressure in the United States to encourage Tokyo to buy U.S. systems outright in order to help reduce this country's trade deficit. The problem here is selecting an approach that will not damage U.S. or bilateral interests. Japan's willingness to go it alone has already been indicated. Indeed, those policies may very well have been justified by past defense-trade linkages. Nevertheless, with the bilateral trade deficit mounting, tougher talk may emerge in Congress, particularly when defense appropriations reach the floor and the annual debate on burdensharing resumes.

The key point in this dispute from a Japanese perspective is that the recent lack of overt pressure from the United States on defense spending has made Japanese progress possible. Defense programs will not gain public support if they are perceived as responses to American pressure. They must be viewed as Japanese plans for Japan's sake, not as an extension of American strategies that might risk Japanese involvement in a U.S. dispute.

JDA recognizes this problem and the potential conflict between self-sufficiency and trade surpluses with the United States. The difficulty lies in persuading planners that sustainability is not synonymous with self-sufficiency. The situation has been complicated recently by Prime Minister Nakasone's April address urging the Japanese to buy more foreign goods. "The only problem," says one Japanese defense official, "is that I don't want to buy anything American-made except weapons."

The FSX program might be viewed as a test case in this instance. Should JDA opt for the F-16 or another American system instead of a purely domestic project, some of the immediate pressure may be relieved. As several U.S. analysts have noted, the jump from co-production to total domestic production is a quantum leap. Japanese companies are given high marks in certain elements of fighter production, but even those firms that are viewed as potential contractors for the FSX admit that considerable weaknesses exist and assume that at least one of the three major elements of the system -- fuselage, engine or wing structure -- will be produced abroad.

SDI: A Role for Japan in "Star Wars"?

Another urgent subject is Japan's participation in research and development for the Strategic Defense Initiative (SDI), the so-called "Star Wars" space defense system. Prime Minister Nakasone reiterated his "understanding" of the proposal at the recent Bonn summit, perhaps to lend President Reagan moral support for his efforts to secure the participation of all the Western allies, or possibly to indicate his eagerness to involve Japan in the project. The SDI is viewed as a major test of the technology transfer agreement in Japan and offers a rare opportunity to both contribute to and benefit from a highly sophisticated R&D effort. Furthermore, should the program result in a workable defense system, it holds the prospect of nuclear security, not a trivial concern to Japanese policymakers.

The problems, however, are numerous, as can well be imagined given the policy considerations and the absence of precedents. The first clearly is cost. Japan is interested not only in the SDI, but also in the National Aeronautics and Space Administration's space station proposal and a number of other major projects, but financial limitations may prevent its extensive participation in more than one of these programs.

Another fear is that participation in the SDI would take Japan one step away from self-defense and much closer to cooperation with Western allies in a larger collective security system. It implies an obligation to defend other nations, even though Japan may not be directly affected by a given situation. This clearly goes beyond current concepts and definitions of "self-defense."

Finally, there is the deployment question. Some Japanese analysts have questioned whether Europe would receive priority over Japan in SDI deployment, or if its deployment would mean a weakening of U.S. willingness to extend the "nuclear umbrella" over Japan. Other concerns include potential violation of the Diet's resolution on peaceful use of space and/or Japan's non-nuclear principles. The prime minister has addressed both points and insists that the two policies would remain intact and uncompromised by SDI participation.

Observers in the United States and Japan agree that the SDI project is likely to demand considerable popular and political attention in Japan for the rest of the year. U.S. experts have briefed Japanese Foreign Ministry officials on the proposal and are awaiting a Japanese decision. The failure at Bonn to achieve a Western consensus on the program may have dampened Japan's ability to embrace the project, but at this time, the government is expected to proceed, despite public opinion polls that suggest uneasiness at the prospect.

The Future

Although in actual budgetary terms Japan's defense efforts still lag behind its needs, the country has made tremendous strides on a policy level in achieving a level of debate and discussion that is notable both for its perceptiveness and depth, as compared with only a few years ago. "It's a more meaningful and honest debate," notes one defense analyst, and this contributes to Japan's growing role in the region and its international stature. Public opinion may be several steps behind policy options, but perhaps this is politically desirable given the special burdens that Japan is forced to carry in terms of international security.

Increased Japanese defense efforts should bring applause in the United States, even among critics of current policies. However, Tokyo's direction could be misinterpreted in this country, leading to problems down the road.

Increased Japanese defense spending, for example, will not reduce the U.S. burden, if only because the Soviet Union continues to accelerate its buildup in the Pacific. Japanese efforts fulfill domestic needs and supplement American forces in the region, which are being stretched even further by Soviet activities in adjacent regions.

A striking change can be seen in the official pursuit of international exchanges and regional activities, such as the recent announcement by Japanese and Chinese officials that top defense officials will exchange visits. Such trips were unheard of when the two countries normalized relations in 1972; now they are an integral part of regional stability.

The general thrust of Japan's recent defense policies is likely to continue even after the Nakasone regime, although perhaps not at the same pace or with the same profile. The two top contenders for Mr. Nakasone's position -- Foreign Minister Shintaro Abe and Finance Minister Noboru Takeshita -- are both viewed as "pro-defense" and support most of the current and projected programs. Mr. Takeshita might be viewed with suspicion in some circles because of his tenure at the budget-conscious Finance Ministry, but the prospect of his becoming premier does not appear to concern defense officials in either country.

A key question now from an American perspective is the degree to which Japan will go it alone on defense production or cooperate with the United States. "Japan's defense is at a crossroads," claims one specialist, "and it must make up its mind which way it will proceed." That decision will have considerable impact not only on Japan but on the rest of the world as well.

For further information, contact Michael Chinworth.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Proposed and Actual FY 1984 Defense Spending

(in millions of yen)

Allocation	Proposed by JDA	Change from FY 1983	Approved by Diet	Change from FY 1983
Ground Self-Defense Forces (GSDF)	Y1,069,728	4.1%	Y1,077,539	4.9%
Maritime Self-Defense Forces (MSDF)	711,896	8.8	705,984	7.9
Air Self-Defense Forces (ASDF)	765,409	9.4	758,721	8.5
Internal Bureaus	9,955	3.7	9,980	4.0
Joint Staff Council	1,804	88.8	1,696	77.6
National Defense Academy	717	-3.7	719	-3.6
National Defense College	9,646	6.9	9,673	7.2
Defense Medical College	11,363	1.1	11,395	1.4
Technical Research and Development Institute	44,295	14.7	43,758	13.3
Central Procurement Office	4,376	-1.7	4,409	-1.0
Defense Facility Administration Agency	314,511	5.3	310,647	4.0
National Defense Council	---	---	124	0.0
Total	2,943,700	6.9	2,934,645	6.55

Source: Japan Defense Agency

Top Ten Defense Contractors, FY 1984

(in billions of yen)

1.	Mitsubishi Heavy Industries, Ltd.	Y235.9	(1)
2.	Kawasaki Heavy Industries, Ltd.	102.7	(3)
3.	Ishikawajima-Harima Heavy Industries, Ltd.	93.3	(4)
4.	Mitsubishi Electric Corp.	92.3	(5)
5.	Toshiba Corp.	60.6	(6)
6.	NEC Corp.	43.2	(2)
7.	Japan Steel Works, Ltd.	23.6	(7)
8.	Sumitomo Heavy Industries, Ltd.	22.1	(41)
9.	Hitachi Zosen Corp.	20.5	(13)
10.	C. Itoh Aviation Co., Ltd.	19.5	(58)

Note: Number in parenthesis indicates FY 1983 ranking.

Source: Nihon Keizai Shimbun

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Japan Postpones SDI Decision

Officials of the Ministry of Foreign Affairs have confirmed that Japan will delay announcement of a decision regarding participation in the Strategic Defense Initiative (SDI), possibly until this fall. This development came after Western nations failed to reach a consensus on the program at Bonn, even though Prime Minister Yasuhiro Nakasone had reassured President Reagan of his "understanding" of the project's aims at the meeting.

Recent public opinion polls in Japan suggest considerable uneasiness about the SDI project. A survey in the Yomiuri Shimbun, for example, indicated that less than 20 percent of those polled supported Japanese participation. Department of Defense (DOD) representatives have briefed Japanese leaders on the program, presumably including anticipated roles for Japan, and had hoped for a response from Tokyo by early June. That goal, however, is not likely to be satisfied.

of Japan and Alaska remain interested in this potentially lucrative trade, and recent developments could breathe new life into the idea.

Governor Sheffield's proposal would avoid much of the legal red tape by only exporting oil that Alaska has received as royalties and that has not been transported through federally regulated facilities. At the moment, the governor is focusing on the 5,300 to 5,900 barrels of oil available daily from two Cook Inlet fields where convenient storage and wharf facilities already exist. Although this approach escapes direct conflict with the Trans-Alaska Pipeline Authorization Act, it still must satisfy the Energy Policy and Conservation Act's strictures that "crude oil may only be exported if the export will directly result in the equivalent or greater quantity and quality importation of crude oil or petroleum products, will have a beneficial effect on consumer prices, and cannot be reasonably processed in the United States."

According to the staff of the governor's office, preliminary discussions with the appropriate Commerce Department officials have already been initiated. Alaskan officials are particularly interested in obtaining a waiver of the most burdensome oil export regulations from the International Trade Administration's director of export administration. While the director has the titular authority to make the decision, the president's approval is the key element. Alaskan officials expect the Commerce Department to evaluate the legal and political barriers to the transaction, and stand ready with the necessary documentation for the application process.

The Commerce Department has stressed that congressional reaction is an important part of the decisionmaking process. To allow even small amounts of Cook Inlet oil to be shipped abroad would meet with strong opposition from the maritime industry, which would argue that it represents a departure from previous maritime legislation (the Jones Act) but, more importantly, that it would be a beachhead toward the goal of freeing all Alaskan oil for export. If a one-year waiver is approved, Governor Sheffield has said that exports of Cook Inlet oil could begin in six months. The governor anticipates the possibility of a renewal at the end of the first year.

Jon Choy

FY 1985 Car Export Quota Allocated

Deciding how many cars individual manufacturers can ship to the United States has been a yearly headache for the Ministry of International Trade and Industry (MITI) ever since Japan's export-restraint program went into effect in April 1981. For the first three years, MITI essentially divided the annual 1,680,000-unit shipment cap on the basis of each maker's 1979-80 share of U.S. retail sales. While no one method was likely to satisfy every company, all of Japan's smaller exporters complained that this formula penalized them as relative latecomers to the American market and bolstered the position of Toyota Motor Corp., Nissan Motor Co., Ltd. and Honda Motor Co., Ltd. -- the U.S. import sales leaders. Second-tier makers were the main beneficiaries when the ceiling on Japan's U.S.-bound car shipments was raised to 1,850,000 units for the April 1984-March 1985 period, but these adjustments did little to stop the talk about the discriminatory allocation system.

MITI's problems this year were not limited to juggling conflicting auto company demands for larger quota allocations. It also had to find a way to quell the outcry in Detroit and on Capitol Hill that greeted Tokyo's decision to boost the retraint level for the year starting April 1 to 2,300,000 cars (see JEI Report No. 13B, April 5, 1985). The solution: earmarking just over three-fifths of the extra 450,000 cars for sale by Japan's five smaller exporters, with the lion's share going to General Motors Corp.'s two affiliates -- Isuzu Motors, Ltd. and Suzuki Motor Co., Ltd. -- and to Mitsubishi Motors Corp., which is partly owned by Chrysler Corp. (see accompanying table).

While the trade ministry once again refused to confirm publicly how many cars each company can export to the United States, auto industry sources report that General Motors and Chrysler will get 312,000 Japanese-made cars during the April 1985-March 1986 period, up from 134,100 vehicles in FY 1984. Suzuki's allotment was raised from 17,000 to 53,000 units. All of these cars go to GM, which sells them in nine Western states as the Chevrolet Sprint. Isuzu, allowed to export 49,500 subcompacts to this country in the year through March 1985, including 29,500 cars carrying the Chevrolet Spectrum nameplate for sale in 16 Eastern states, will be able to ship 120,000 units in FY 1985 to GM and its own U.S. dealers. For its part, Mitsubishi Motors can ship 208,000 cars compared with 122,612 units in the April 1984-March 1985 period, when Chrysler received 87,600 cars for sale by Dodge and Plymouth dealers.

Unofficial Quota Allocations, FY 1981-FY 1985

(in units)

Exporter	FY 1981-FY 1983 Quota	FY 1984 Quota	Tentative FY 1985 Quota	Increase FY 1984-FY 1985
Toyota Motor Corp.	516,659	551,792	617,000	11.8%
Nissan Motor Co., Ltd.	456,030	487,040	545,000	11.9
Honda Motor Co., Ltd.	348,631	372,338	425,000	14.1
Mazda Motor Corp.	159,282	173,468	226,000	30.3
Mitsubishi Motors Corp. (incl. sales to Chrysler Corp.)	112,584	122,612	208,000	69.6
Fuji Heavy Industries, Ltd.	70,014	76,250	106,000	39.0
Isuzu Motors, Ltd. (incl. sales to General Motors Corp.)	16,800	49,500	120,000	142.4
Suzuki Motor Co., Ltd. (for sale to General Motors Corp.)	0	17,000	53,000	211.8
Total	1,680,000	1,850,000	2,300,000	24.3

Although GM and Chrysler were the winners of this year's quota-allocation sweepstakes, neither company got as many cars as it says it wanted. When the world's top automotive maker first unveiled its "Japan strategy" for the U.S. small car market, it planned to import 80,000 to 100,000 mini cars a year from Suzuki as well as up to 200,000 subcompacts annually from Isuzu. Chrysler also claims that its small car marketing plans received a setback. Right after President Reagan signaled Tokyo to allow its restraints on car exports to lapse, the number-three U.S. auto maker, the most vocal proponent of restrictions, revealed that it had placed an order for up to 200,000 more Mitsubishi Motors-built vehicles.

As in previous years, the big mystery about MITI's FY 1985 company allotments is how the ministry divvied up the separate quota on exports of four-wheel-drive vehicles, station wagons and mini vans. This quota was presumably increased by the same 24.3-percent margin as the ceiling on sedans, which would bring it to about 112,900 units. It can only be assumed that Fuji Heavy Industries, Ltd., the manufacturer of Subaru vehicles, again received the bulk of the quota, with smaller shares assigned to Mitsubishi Motors, Toyota and perhaps one or two other exporters.

Susan MacKnight

Economists, Businessmen Cite High Dollar in Trade Hearings

International economists and business representatives concurred in recent hearings before the House Foreign Affairs Subcommittee on Asia and Pacific Affairs that the imbalance in the dollar-yen exchange rate is the principal cause of difficulties facing the United States in international markets. But despite agreement that both countries must take immediate steps to help rectify this imbalance, the witnesses were unable to agree on a specific course of action.

The hearings, held May 9 and 14, focused on macroeconomic problems affecting bilateral relations and access to Japanese markets. Attitudes toward Japanese policies varied among the witnesses, who included C. Fred Bergsten, director of the Institute for International Economics, and Lawrence Krause, senior economist of the Brookings Institution, as well as officials of Motorola Inc., Honeywell, Inc., the American Paper Institute, the National Forest Products Association and the Chocolate Manufacturers Association. Most participants urged restraint in dealing with Tokyo, although they also called for continued efforts by Washington to open Japan's markets to U.S. products. Mr. Krause emphasized, for example, that the United States should refrain from "bullying" policymakers in Tokyo and should be prepared to consult with its ally on a broader range of international issues. For his part, Mr. Bergsten urged adjustments in Japanese macroeconomic policies to strengthen the yen, but framed them as voluntary actions.

Motorola spokesman Richard Heimlich continued the company's lonely pursuit of an import surcharge at the May 14 hearing, a course rejected by other business and trade association representatives. They agreed that the overvalued dollar significantly impedes U.S. competitiveness overseas but nevertheless urged the administration to press harder for increased market access in Japan, utilizing existing authority to negotiate new agreements rather than waiting for congressional approval of a new bill. Witnesses also said that congressional resolutions expressing frustration gave Washington added leverage in the negotiating process.

There is a growing consensus that the strong dollar is the key macroeconomic factor affecting American competitiveness in international

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TAKING FROM PETER TO PAY PAUL: 1985 JAPANESE FISCAL POLICY

Summary

Austerity has been the keystone of Japanese fiscal policy since Prime Minister Yasuhiro Nakasone entered office in late 1982, a direction clearly reflected in the fiscal 1985 budget. Mr. Nakasone was successful in defending his austerity policies during the 1982-83 economic slowdown, arguing that a retreat back to Keynesian "pump priming" would harm long-term growth. The economy's rebound in the second half of 1983 and throughout 1984 temporarily hushed the prime minister's domestic critics. As the economy has slowed and foreign criticisms of Japan increased, the fiscal debate has surfaced again but in a more sophisticated manner.

In addition to the usual clash between advocates of loose and tight spending policies, a battle over priorities has developed. In the face of rapidly mounting debt-related expenses and a projected leap in social security costs, government and industry leaders are reassessing the current mix of spending with a view toward invigorating the private sector. This debate, perhaps even more than the fight over austerity, will have important economic, social and political consequences.

Overall Fiscal Growth

Outlays - A close look at the two principal Japanese budgets over the past six years reveals the influence of belt-tightening policies. Growth of overall general account and fiscal investment and loan program (FILP) outlays has been sharply reined in (see Tables 1 and 2). There is a clear break in growth rates after fiscal 1983, the first year in which Mr. Nakasone controlled the fiscal levers. If interest on the national debt and mandatory transfers to local governments are taken out, the decline in discretionary spending that remains is even more pronounced (see Table 3).

Revenues - The drive to balance the budget also has an impact on government receipts. Reducing the amount of bonds issued to finance current general account outlays is a pillar of the prime minister's policies. The accelerating shrinkage of bond issues highlights this point, and has pushed down the deficit from 25 percent of total outlays in FY 1984 to 22 percent in FY 1985. Conversely, taxes are expected to provide 73 percent of total receipts in the current year, up from 68 percent last fiscal year. A similar picture can be seen in the sources for FILP expenditures: government bonds and borrowing have fallen to zero from 31 percent in the space of three years.

The Bottom Line - From an aggregate standpoint, Mr. Nakasone's austerity drive has been quite successful. But what has been the impact on the economy? Reviewing national account statistics for the past several years shows that the public sector has certainly reduced its share of the nation's output of final goods and services. Current government outlays increased more quickly than overall GNP in only one of the past six years and the growth of public-sector fixed investment was also positive just once during the same period. As such, Mr. Nakasone would find it hard to claim that his fiscal policies directly aided the economic recovery. He might assert that cutting back government spending provides a better environment for growth, but even this is doubtful given the country's abundant private savings. He may be preparing the country to meet future fiscal crises, but his policies have little positive impact on current economic activity -- and may even be a slight drag. Hence the debate over fiscal priorities, which requires a closer look at past, present and future expenditures and revenues.

Robbing Peter to Pay Paul

The prime minister has been trying to support his tight-fisted approach by claiming that the cuts are as evenly distributed as possible. It turns out, however, that they are not very even at all. There are consistent winners and losers in the Nakasone budgets, as a closer examination of Tables 1 and 2 reveals. This is most true of the FY 1985 budget, where the ceiling on total discretionary expenditures was held constant and resources were shuffled among line items to yield significant growth for some and continued shrinkage for others.

Spending for defense and foreign aid are the only two discretionary categories that have enjoyed consistent growth. The reasons for this are clearly political: Tokyo's pledges to promote third-world development and improve its defense contribution are being backed up with yen. Defense contractors obviously benefit, as do Japan's less developed partners. The annual increases, however, have been greater than GNP growth, forcing cuts in many domestically important categories.

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The most politically painful of these is the rapid reduction in monies for public works projects. Almost no line items within public works escaped the axe during the past two fiscal years. The drop is most shocking in disaster relief projects, this despite boosts from supplementary budget appropriations. The initial figure for FY 1984 was raised by 91 percent, yet a drop of 46 percent was recorded from FY 1983. The food price support program is another sacred cow that has been sent to the slaughterhouse: it is getting smaller, faster every year.

A final area that could prove painful is funds for small business. Although smaller enterprises pack less political punch individually, they employ the majority of Japan's workers, making them economically and politically important. Tokyo is advocating reliance on individual initiative and entrepreneurial spirit rather than government help for small businessmen, an approach that may not meet the majority's needs. The liberalization of Japanese capital markets may be of more use to small firms than Tokyo's ambitious plans. Even expenditures for education and science and technology, two of the prime minister's priorities, have been tightly restrained.

Other categories that show moderate overall changes often mask deep cuts or big increases in particular components. This finetuning is best exemplified by outlays for social security: the 2.7 aggregate rise shields a 5.8 percent increase in social insurance and a 5.1 percent decrease in public assistance. In any case, losers easily outnumber winners in this version of "robbing Peter to pay Paul."

And Reaching Deeper into Everyone's Pockets

In addition to the tight clamp on spending, the prime minister has pushed hard to reform the revenue structure. As mentioned earlier, reducing dependence on new issues of government bonds is a priority that forces taxes to rise since the decrease in the deficit is not matched by a fall in spending. Unlike the U.S. tax system, the Japanese government makes marginal adjustments in the national and local tax codes every year. These annual tax reforms usually take the form of altered commodity taxes and investment incentives, but can involve major income tax reductions, as in FY 1984 (see Appendix).

The changes proposed for fiscal 1985 national taxes hit corporations almost exclusively. Coming on top of FY 1984 increases in corporate income tax rates, there is no question as to whether individuals or businesses shoulder more of the tax burden. The share of total tax revenues paid by corporations has risen from 29 percent in FY 1981 to an estimated 33 percent in FY 1985. Personal income taxes will account for approximately 36 percent of total tax revenues this fiscal year, down from 40 percent in FY 1982. Compared with U.S. figures of 45 percent for individuals and 9 percent for corporations in FY 1985, it is easy to understand why Japanese business leaders have been clamoring for tax reform.

Dissatisfaction with the current tax structure is not limited to corporations, however. The majority of the population considers the current system to be unfair, not because of skewed statutory rates but because of non-uniform collection methods. Taxes are deducted from salaried workers' wages by the employer, insuring full compliance. For self-employed workers and farmers, who still account for a major portion of the workforce, a system of voluntary income reporting and self-tax assessment is the law. It is no wonder that tax avoidance is low among the first group but high among the second.

Therefore, the pressure for major tax reform is growing due to individual and corporate unhappiness and the demands of deficit reduction. The solution raised most often by Mr. Nakasone and Finance Minister Noburo Takeshita is the introduction of a large indirect tax modeled after the value-added tax (VAT) levied by European countries. A tax collected at every stage of the production process has the advantage of raising a large amount of revenue, but imposes a larger administrative burden on manufacturers and may not result in progressive effective tax rates. To balance the increase in prices that would almost certainly result from a VAT, the Finance Ministry proposes reductions in both individual and corporate tax rates as well as uniform reporting and collection methods.

The Ministry of Finance is also implementing an attack on tax loopholes. It is trying to toughen the regulation of tax-free personal savings accounts and wants to crack down on the accounting practices of multinational corporations.

There is broad-based support for tax reform but no consensus on what the reforms should be. The government has been stoking the fires heating the tax debate by issuing a grim medium-term fiscal outlook that shows a widening gap between outlays and revenues if no major new taxes are instituted (see Table 4). The government has initiated a one-year study of a VAT system and hopes to begin making major changes next fiscal year. Opposition parties are quite cautious about prospects for adopting major reforms, partly because they have no alternative policies but also because they have not been able to gauge public reaction to the proposal accurately. The debate is becoming more refined, however, as policymakers discuss the potential and priorities of the Japanese economy.

Is Austerity Alone the Answer?

Despite all the commotion over Secretary of State George Shultz's suggestion that Japan adopt a stimulative fiscal policy (see JEI Report No. 16B, April 26, 1985), the debate over whether austerity is the proper policy course has been settled mostly in its favor. Although a few major political figures, including Economic Planning Agency head Toshio Komoto, still believe that a Keynesian stimulative fiscal policy can be pursued without adverse price consequences, the mainstream of thought remains solidly behind the prime minister's drive to balance the budget.

Mr. Nakasone's argument is that rapidly ballooning debt service costs and maturing debt threaten the future prosperity of Japan. The country must break its addiction to deficit spending or face being overwhelmed by interest payments in the next decade. Coupled with across-the-board limits on spending and borrowing, deregulation of goods and capital markets as well as privatization of the large public monopoly corporations will unleash the energies of private enterprise and assure steady growth, the prime minister maintains. Japanese citizens have accepted his message that belt-tightening today will assure a prosperous tomorrow.

The problem is that they may be following the concept too rigidly. Consumer spending, which still accounts for the majority of GNP, has remained sluggish even while the economy has rebounded. This, plus declining government fixed investment and current spending, has meant that growth has been export-driven. Tokyo's fears that this would exacerbate trade frictions have proven accurate and given ammunition to advocates of a positive fiscal policy.

The Nakasone cabinet faces additional pressures from within the Liberal Democratic Party (LDP). Party members who represent districts that rely on public works projects have been squeezed by spending limits. There is general concern that the spending cuts will endanger the pork-barrel politics that have helped keep the party in power. Finally, there is general unhappiness with the quality of life obtainable by the average citizen: the people responsible for making Japan the second largest industrial economy have not reaped commensurate benefits in terms of social infrastructure. For all these reasons, policy-makers are now looking beyond a simplistic austerity program to one that involves reordered priorities and a new kind of government involvement.

Reordered Priorities

A mid-1984 proposal by LDP executive council chairman Kiichi Miyazawa to devote more resources to social and economic infrastructure helped crystallize the debate over priorities. Although the "asset doubling" plan was meant mostly to boost his fortunes in the prime ministerial elections (see JEI Report No. 40B, October 19, 1984), it has nonetheless generated considerable debate over the wisdom of uniformly cutting spending (see JEI Report No. 17B, May 3, 1985).

Briefly, the Miyazawa proposal would increase public investment in infrastructure, such as roads, sewers and parks, while simultaneously pursuing administrative reform, which encompasses market deregulation and public company privatization. The resulting increase in demand would push real economic growth up to 5 to 5.5 percent annually for the next ten years and improve the quality of life. This compares favorably with current government estimates of sustainable real annual growth of 4 to 4.5 percent. The proposal does not neglect the deficit problem, but relies on growth to provide enough tax revenues to meet future needs. As such, Mr. Miyazawa has taken a page from President Reagan's book by offering the Japanese a more optimistic vision of the future as well as the prospect of an immediate improvement in economic conditions.

The proposal brings up two fundamental questions about the Japanese economy: what is the maximum sustainable level of growth; and what is the order of public priorities? The growth debate is reminiscent of the 1960s when the economy easily outperformed government estimates. Mr. Nakasone's camp advocates moderate growth, arguing that supplies of resources and marketplaces for final goods have changed significantly from earlier decades. Others say that by focusing on its many unmet domestic needs, Japan can attain higher rates of growth, although not the 10 percent jumps recorded in the 1960s. There is even a zero-growth camp, which points to limited natural resources as a reason for no growth and calls for a complete reevaluation of spending priorities.

In terms of priorities, Mr. Nakasone has indicated his preferences despite his even-handed rhetoric -- defense and foreign aid have received consistent increases at the expense of nearly everything else. The "asset doubling" plan is equally emphatic in its praise of government investment in social and economic infrastructure. The government is certainly the only economic actor able to provide a significant increase in roads, sewers and similar facilities, but again the question is who will pay and how fast should the public sector invest?

Conclusion

Japanese fiscal policy remains on a course of reduced spending and borrowing. Its direct impact on economic growth, therefore, is likely to remain small. Monetary and regulatory reform are likely to have a greater impact in the remaining 18 months of Mr. Nakasone's prime ministership.

The seductive call of "asset doubling" presents the prime minister with a major challenge, however. The evolving debate over priorities will determine spending patterns that will have major domestic and international consequences. Equally important, it will influence who will head the government if Mr. Nakasone cannot win a third term. The attention to fiscal policy, therefore, is greater than it has been for several years. Not only does this attention come from the Japanese people, but also from the capitals of Japan's trading partners. Mr. Nakasone's response to this evolving debate will receive close inspection in the months to come.

For further information, contact Jon Choy.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

JEI Report will not be published May 31 because of the Memorial Day holiday. The next issue will appear June 7, 1985.

Table 1: Japan's General Account, FY 1980-FY 1985

(in billions of yen and percentage change)

	FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985*	
	(revised)		(revised)		(revised)		(revised)		(revised)		(initial)	
Total Expenditures	Y43,681.4	10.1%	Y47,125.4	7.9%	Y47,562.1	0.9%	Y50,839.4	6.9%	Y51,513.4	1.3%	Y52,499.6	3.7%
Social Security	8,264.4	8.1	8,867.6	7.3	9,141.6	3.1	9,231.3	1.0	9,231.0	-0.0	9,573.6	2.7
Public Assistance	956.3	3.7	992.3	3.8	1,080.6	8.9	1,129.7	4.6	1,139.4	0.9	1,081.5	-5.1
Social Welfare	1,388.2	12.5	1,508.2	8.6	1,603.6	6.3	1,917.5	19.6	1,999.2	4.3	2,004.2	0.3
Social Insurance	5,130.6	8.7	5,566.8	8.5	5,658.2	1.6	5,378.9	-4.9	5,347.9	-0.6	5,658.4	5.8
Health Service	410.2	4.9	418.3	2.0	425.6	1.7	435.4	2.3	467.0	7.3	462.1	-1.0
Unemployment	379.1	0.5	382.1	0.8	373.7	-2.2	369.8	-1.1	367.5	-0.6	367.3	-0.0
Education and Science	4,601.4	6.4	4,821.6	4.8	4,832.6	0.2	4,834.3	0.0	4,866.5	0.7	4,840.9	0.2
Compulsory Education	2,024.3	7.3	2,168.4	7.1	2,220.5	2.4	2,254.5	1.5	2,302.6	2.1	2,357.5	2.4
Transfer to School Account	980.8	5.9	1,014.3	3.4	1,015.5	0.1	1,015.6	0.0	1,071.7	5.5	1,062.7	-0.8
Science Promotion	351.8	1.5	370.7	5.4	381.8	3.0	392.0	2.7	410.8	4.8	381.6	1.3
School Facilities	622.3	8.1	583.0	-6.3	528.8	-9.3	489.8	-7.4	427.3	-12.8	385.1	-9.9
School Aid	541.7	3.3	594.5	9.8	595.2	0.1	592.0	-0.5	567.9	-4.1	570.3	0.4
Student Loans	80.5	22.0	90.6	12.6	90.8	0.2	90.3	-0.5	86.2	-2.3	83.8	-2.8
National Debt Service	5,491.6	25.5	6,654.2	21.2	6,906.9	3.8	8,167.5	18.3	9,155.1	12.1	10,244.2	11.7
Pensions	1,639.9	9.3	1,803.0	9.9	1,891.7	4.9	1,890.0	-0.1	1,885.8	-0.2	1,863.7	-1.2
Civil Servants	130.7	3.8	136.1	4.1	135.4	-0.5	132.7	-2.0	128.2	-3.4	124.8	-2.7
Veterans	1,352.9	9.7	1,508.5	11.5	1,590.1	5.4	1,603.6	0.9	1,601.1	-0.2	1,578.7	-1.4
Administrative Costs	9.4	1.7	10.0	6.5	10.3	3.4	10.6	2.3	10.5	-0.9	10.3	-1.7
War-bereaved Families	146.9	11.7	148.4	1.0	155.9	5.0	143.1	-8.2	146.0	2.0	149.9	2.7
Local Finance	7,828.8	17.5	8,722.6	11.4	7,976.4	-8.6	7,672.9	-3.8	9,219.0	20.2	9,690.1	5.0
Local Allocation Tax	6,952.1	17.3	8,039.6	15.6	7,535.2	-6.3	7,315.1	-2.9	9,036.1	23.5	9,690.1	6.8
Special Grants	379.5	**	130.6	**	0.0	**	2.0	**	0.0	**	0.0	**
Interest Support	497.2	37.9	552.5	11.1	441.1	-20.2	355.8	-19.4	182.9	-48.6	0.0	**
Defense	2,266.5	8.3	2,429.1	10.0	2,566.6	3.0	2,761.0	7.6	2,934.6	6.3	3,137.1	6.9
Public Works	6,801.0	2.1	7,001.2	2.9	7,281.3	4.0	7,224.3	-0.8	6,883.5	-4.7	6,368.9	-2.3
Erosion, Flood Control	1,105.0	-0.3	1,107.4	0.2	1,106.4	-0.1	1,107.4	0.1	1,098.5	-0.8	1,082.6	-1.4
Road Improvement	1,920.0	-1.8	1,901.8	-0.9	1,891.9	-0.5	1,893.3	0.1	1,899.9	0.4	1,826.0	-2.5
Harbors, Airports	528.6	0.3	523.6	-0.9	522.6	-0.2	524.1	0.3	519.8	-0.8	511.8	-1.5
Housing	802.3	12.2	843.0	5.1	877.9	4.1	894.3	1.9	915.0	2.3	757.7	-1.1
Living Environment	966.5	0.8	985.8	2.0	987.2	0.1	988.2	0.1	980.3	-0.8	970.3	-1.0
Agriculture	897.8	0.1	900.0	0.2	899.2	-0.1	900.0	0.1	891.9	-0.9	878.9	-1.5
Forest Roads and Water	180.3	0.6	180.7	0.2	178.4	-1.2	177.1	-0.7	173.2	-2.2	169.6	-2.1
Adjustment Reserves	13.1	-10.0	11.8	-10.0	11.7	-0.3	11.4	-3.1	10.9	-3.7	10.7	-2.2
Disaster Reconstruction	387.6	25.7	547.2	41.3	806.1	47.2	728.4	-9.6	394.0	-45.9	161.3	-21.8
Economic Cooperation	381.9	13.1	425.1	11.3	474.9	11.7	498.2	4.9	543.9	9.2	586.3	7.8
Small Business Measures	242.7	4.0	248.1	2.2	244.3	-1.5	238.9	-2.2	229.2	-4.1	216.2	-5.7
Energy Measures	424.9	31.9	496.2	16.8	559.3	12.7	557.4	-0.3	603.2	8.2	628.8	4.2
Food Price Supports	955.5	-2.7	1,014.1	6.1	1,005.5	-0.9	917.2	-8.8	813.2	-11.3	695.4	-14.5
Miscellaneous	4,432.8	6.1	4,478.3	1.0	4,451.0	-0.6	4,383.9	-1.5	4,354.9	-0.7	4,324.5	-1.0
Others	0.0	**	0.0	**	0.0	**	2,252.5	**	125.3	**	0.0	**
Reserves	350.0	**	164.2	**	230.0	**	210.0	**	170.0	**	350.0	**
Total Revenues	43,681.4	10.1	46,788.1	7.1	47,562.1	1.7	50,839.4	6.9	51,513.4	1.3	52,499.6	3.7
Tax, Stamp Revenues	27,145.0	16.0	31,831.6	17.3	30,498.0	-4.2	31,902.0	4.6	34,835.0	9.2	38,550.0	11.4
Monopoly Profits	783.3	30.5	778.8	-0.6	761.8	-2.2	1,004.2	31.8	3,414.9	-30.9	2,269.6	-32.3
Public Enterprise Receipts	10.0	32.9	12.2	21.8	14.4	17.7	15.1	5.1				
Sale of Public Properties	48.3	15.9	72.9	51.1	67.3	-7.7	82.7	10.3				
Miscellaneous	1,076.4	4.3	1,474.6	37.0	1,854.6	25.8	3,843.3	107.2				
Public Bonds	14,270.0	1.6	12,900.0	-9.6	14,345.0	11.2	13,790.0	-3.9	12,865.0	-6.7	11,680.0	-7.9

*Percentage changes for FY 1985 are based on the initial budget for FY 1984.
**Cannot be calculated or meaningless.

Source: Ministry of Finance

Table 2: Uses and Sources of Japan's Fiscal Investment and Loan Program Outlays, FY 1980-FY 1985

(in billions of yen and percentage change)

	FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985	
Total Outlays	Y18,179.9	8.0%	Y19,489.7	7.2%	Y20,288.8	4.1%	Y20,702.9	2.0%	Y21,106.6	1.9%	Y208,58.0	-1.2%
Housing	4,761.9	10.6	5,111.4	7.3	5,130.1	0.4	5,304.1	3.4	5,289.5	-0.3	5,289.3	-0.0
Water Works	2,571.7	7.4	2,716.3	5.6	2,863.2	5.4	2,764.8	-3.4	3,007.5	8.8	3,280.9	9.1
Welfare	628.0	-2.2	658.4	4.8	701.3	6.5	652.0	-7.0	637.9	-2.1	595.7	-6.6
Education	808.9	-2.6	794.3	-1.9	762.8	-3.9	783.0	2.6	777.1	-0.8	745.3	-4.1
Small Business	3,400.4	17.0	3,825.2	12.5	3,905.9	2.1	3,942.2	0.9	3,968.3	0.7	3,764.4	-5.1
Agriculture	885.9	3.9	916.6	3.5	906.8	-1.1	963.0	6.2	1,034.8	7.5	890.6	-13.9
Land Conservation, Disasters	312.0	35.7	276.6	-11.2	310.2	11.9	332.5	7.4	379.1	13.8	472.8	24.7
Roads	1,031.4	3.1	1,182.6	14.7	1,472.6	24.5	1,583.7	7.5	1,711.7	8.1	1,826.4	6.7
Transportation and Communication	1,743.7	0.0	1,953.8	12.0	1,949.0	-0.3	1,924.6	-1.2	1,887.6	-1.9	1,763.4	-6.6
Regional Development	469.4	11.3	445.9	-5.0	538.1	20.7	511.4	-5.0	500.0	-2.2	511.2	2.2
Industry and Technology	547.3	98.0	593.6	8.5	635.6	7.1	626.2	-1.5	620.3	-0.9	603.3	-2.7
Foreign Trade and Economic Cooperation	1,019.3	-2.9	1,005.0	-1.4	1,113.2	10.8	1,315.4	18.2	1,292.8	-1.7	1,114.7	-13.8
Total Revenues	20,679.9	12.8	22,989.7	11.2	23,788.8	3.5	24,402.9	2.6	24,706.6	1.2	25,858.0	4.7
Industrial Investment Special Account	16.9	-41.9	18.9	11.8	18.9	0.0	5.2	-72.5	4.8	-7.7	31.4	554.2
Trust Fund Bureau Fund	17,389.4	14.7	19,480.2	12.0	19,568.9	0.5	19,135.3	-2.2	18,905.2	-1.2	20,029.0	5.9
Postal Savings	7,900.0	9.7	8,900.0	12.7	7,900.0	-11.2	7,900.0	0.0	6,900.0	-12.7	6,400.0	-7.2
Pensions	3,300.0	24.5	3,900.0	18.2	4,300.0	10.3	4,100.0	-4.7	3,850.0	-6.1	3,950.0	2.6
Payments, etc.	6,189.4	16.4	6,680.2	7.9	7,368.9	10.3	7,135.3	-3.2	8,155.2	14.3	9,679.0	18.7
Postal Life Insurance Fund	1,692.0	8.5	1,890.0	11.7	1,981.0	4.8	2,354.4	18.8	2,586.6	9.9	2,587.6	0.0
Government Guaranteed Bonds and Borrowings	1,581.6	0.2	1,600.6	1.2	2,220.0	38.7	2,908.0	31.0	3,210.0	10.4	3,210.0	0.0

Note: All figures are based on initial budgets.

Source: Ministry of Finance

Table 3: Discretionary Spending in the General Account, FY 1980-FY 1985

(in billions of yen and percentage change)

	FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985*	
Total Expenditures	Y43,681.4	10.1%	Y47,125.4	7.9%	Y47,562.1	0.9%	Y50,839.4	6.9%	Y51,513.4	1.3%	Y52,499.6	3.7%
Minus												
Debt Service and Transfers to Local Governments	12,443.7	20.8	14,693.8	18.1	14,442.2	-1.7	15,482.7	7.2	18,191.2	17.5	19,914.2	10.4
Equals												
Discretionary Spending	31,237.7	6.4	32,094.3	2.7	33,120.0	3.2	35,356.8	6.8	33,322.2	-5.8	32,585.4	-0.0

*Percentage changes for FY 1985 are based on the initial budget for FY 1984.

Source: Ministry of Finance

Table 4: Medium-Term Budget Projection, FY 1984-FY 1988

(in billions of yen and percentage change)

	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
Payments										
Debt Service	Y9,155.1	11.7%	Y10,224.1	11.7%	Y12,930.0	26.5%	13,800.0	6.7%	Y14,550.0	5.4%
Transfers to Local Governments	8,886.4	21.5	9,690.1	9.0	10,330.0	6.6	11,140.0	7.8	12,010.0	7.8
General Expenditures	32,585.7	-0.1	32,585.4	-0.0	34,660.0	6.4	36,070.0	4.1	37,430.0	3.8
					[35,180.0	8.0	37,150.0	5.6	39,110.0	5.3]
Current Expenditures	24,654.9	1.1	24,951.3	1.2	26,910.0	7.9	28,250.0	5.0	29,530.0	4.5
					[27,310.0	9.5	29,100.0	6.6	30,860.0	6.0]
Capital Expenditures	7,930.8	-3.7	7,634.1	-3.7	7,750.0	1.5	7,820.0	0.9	7,900.0	1.0
					[7,870.0	3.1	8,050.0	2.3	8,250.0	2.5]
Total Payments	50,627.2	0.5	52,499.6	3.7	57,920.0	10.3	61,010.0	5.3	63,990.0	4.9
					[58,440.0	11.3	62,090.0	6.2	65,670.0	5.8]
Receipts										
Tax Revenues	34,596.0	7.1	38,550.0	11.4	41,290.0	7.1	44,240.0	7.2	47,400.0	7.2
Non-tax Revenues	3,351.2	-29.0	2,269.6	-32.3	2,370.0	4.4	2,530.0	6.5	2,690.0	6.5
Government Bonds	12,680.0	-8.0	11,680.0	-7.9	10,530.0	-9.8	9,380.0	-10.9	8,230.0	-12.3
Deficit Bonds	6,455.0	-5.2	5,730.0	-11.2	4,580.0	-20.1	3,430.0	-25.1	2,280.0	-33.5
Construction Bonds	6,225.0	-10.8	5,950.0	-4.4	5,950.0	0.0	5,950.0	0.0	5,950.0	0.0
Total Receipts	50,627.2	0.5	52,499.6	3.7	54,190.0	3.2	56,150.0	3.6	58,320.0	3.9
Shortfall (Total Payments minus Total Receipts)	--	--	--	--	3,730.0	--	4,860.0	--	5,670.0	--
					[4,250.0	--	5,940.0	--	7,350.0	--]
Current Expenditures	--	--	--	--	3,610.0	--	4,680.0	--	5,450.0	--
					[4,010.0	--	5,530.0	--	6,780.0	--]
Capital Expenditures	--	--	--	--	120.0	--	180.0	--	220.0	--
					[240.0	--	410.0	--	570.0	--]

Note: Figures in brackets allow for new stimulative spending.

Assumptions: For debt service costs, transfer of the required percentage of the outstanding debt to the sinking fund will be in effect after FY 1986; the national government will transfer to local governments 32 percent of national income, corporate and liquor taxes, which are expected to increase at the nominal rate of economic growth of 6.5 percent with an income elasticity of 1.2; overall tax revenues are based on nominal economic growth of 6.5 percent and an income elasticity of 1.1; and deficit bonds will be reduced by Y1,150 billion annually after FY 1986.

Source: Ministry of Finance

Appendix: Japan's National Tax Reforms, FY 1983-FY 1985

FY 1983

1. Repeal and Curtailment of Special Taxation Measures - A variety of special taxation measures on corporate income were repealed or curtailed, including moving up a repeal of the tax-free reserve for price fluctuations.

2. A Review of the Rate of Reserve for Bad Debts - The deductible allowance for the tax-free reserve for bad debts will be decreased for banks and insurance firms.

3. Measures Related to Basic Materials Industries Extraordinary Measures Law - New measures will be implemented to support the new basic industries legislation, including increasing to ten years from five years the period in which losses from scrapping capacity can be carried over.

4. Measures to Promote Machinery and Equipment Investment by Small and Medium Enterprises - A two-year special depreciation allowance let small firms apply a 30 percent depreciation rate to the overall value of new plant and equipment that exceeds the average capital investment for the past five years.

5. Revision in Stock Evaluation Methods for the Inheritance Tax - An heir of non-listed stocks can choose to use the similar-business-comparison tax system together with the net-asset-evaluation system. Previously only the latter method was available.

6. Revision of the Tax Credit for the Acquisition of a Home- While the fixed amount (Y17,000) tax credit was abolished, both the fixed rate of tax credit and the upper ceiling of the credit value were raised from 7 percent to 18 percent and from Y50,000 to Y150,000, respectively.

Estimated Revenue Effects of FY 1983 Reforms

(in billions of yen)

	First Year	Out Years
1. Special Taxation Measures	Y14.0	Y22.0
2. Bad Debt Reserve Rate	42.0	43.0
3. Small Business Investment Incentives	-22.0	-30.0
4. Housing Credits	-1.0	-2.0
Total	33.0	33.0

FY 1984

1. Individual Income Tax Reduction - The changes included: increasing the taxpayer, spouse and dependent exemptions from Y290,000 to Y330,000; exemptions for widows, students, senior citizens and the handicapped were raised from Y230,000 to Y330,000; the deduction on employment income was raised from Y500,000 to Y550,000; the tax schedule was revised by reducing the top rate to 70 percent from 75 percent, and raising the lowest rate to 10.5 percent from 10 percent.

2. Measures to Promote Investment - Small enterprises that invest in energy efficient equipment can take a special initial depreciation of 30 percent and a tax credit of 7 percent for two years. In addition, special incentives for "technopolis" regional development projects were instituted.

3. Measure to Finance Tax Reductions - The corporate income tax rates were raised for two years from 42 percent to 43.3 percent on undistributed profits and from 32 percent to 33.3 percent on distributed profits. Corporations were no longer allowed to postpone income tax payments. Provisions allowing corporations to carry back losses for up to two years were suspended for two years. Liquor taxes were raised. Luxury sport and consumer electronic goods became subject to the commodity tax. And automobile taxes were raised from 22.5 percent to 23 percent for standard passenger cars and from 17.5 percent to 18.5 percent for small passenger cars.

4. Tax Compliance Provisions - Self-employed individuals were required to follow stricter accounting and record-keeping rules.

5. Petroleum Tax Increase - The crude oil tax and the tax on certain petroleum products was set at 4.7 percent, up from 3.5 percent. Petroleum gas (including liquefied natural gas) was subject to a new tax of 1.2 percent.

Estimated Revenue Effects of FY 1984 Reforms

(in billions of yen)

	First Year	Out Years
1. Personal Income Tax Cut	Y-870.0	Y-765.0
2. Investment Incentives	-62.0	-71.0
3. Increases in Corporate, Liquor and Commodity Taxes	785.0	799.0
4. Changes in Corporate Tax Regulations	145.0	60.0
Total	-2.0	23.0
Petroleum Tax Increase (not counted in General Account)	67.0	134.0

FY 1985

1. Reduction of Tax-Exempt Corporate Retirement Reserves - The tax-free portion of corporate retirement reserves was reduced from 40 percent to 35 percent.

2. Increased Public and Non-Profit Corporate Taxes - The basic corporate tax rate for public and non-profit firms was raised from 26 percent to 35 percent.

3. Changes for Corporations Experiencing Current Deficits - Businesses operating in the red must defer for two years the refund of any unused credits gained from witheld income taxes.

4. Special Taxation Measures - The tax credit for research and development will be based on a three-year moving average of past expenses, bringing it into line with the U.S. system. Incentives for high technology small businesses were created. The FY 1983 small business investment incentive was abolished.

5. Entertainment Admission Tax - The taxable minimums on most entertainment admissions, including movie, theater and race tickets, were raised according to the type of event.

Estimated Revenue Effects of FY 1985 Reforms

(in billions of yen)

	First Year	Out Years
1. Reduced Bad Debt Reserve Deductible	Y200.0	Y185.0
2. Increased Rates for Public and Non-Profit Corporations	32.0	32.0
3. Refund Deferrals by Deficit Corporations	84.0	--
4. Special Taxation Measures		
Research and Development Credits	-13.0	-16.0
High Technology Small Business	-10.0	-14.0
Abolition of Small Business Investment Incentive	17.0	22.0
Others	10.0	9.0
5. Admissions Tax Minimum Increase	-4.0	-4.0
Total	316.0	214.0

Source: Ministry of Finance, Budget Bureau

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DOD Releases Burdensharing Report

The Department of Defense has released its annual report on allied support of common defense efforts, concluding again that Japanese contributions to general security are significant, but far behind Western nations. In language similar to previous reports, DOD suggested that Japan is doing less than its fair share in self-defense and regional security in the Pacific.

The burdensharing report, mandated by Congress, assesses the individual and collective security efforts of the North Atlantic Treaty Organization (NATO) and Japan. This year's survey concluded that more nations met NATO's goal of a 3 percent annual defense spending increase in 1984 than in the previous year. Only four countries achieved that standard in 1983; twice as many reached the same plateau one year later.

Despite what DOD views as insufficient spending by several nations, Defense Secretary Caspar Weinberger urged Congress not to resort to pressure to

Meanwhile, Japanese fishermen who ply American waters are watching a U.S. court case in which U.S. environmentalists are suing the U.S. government to force it to impose fishing sanctions against Japan for that country's defiance of an International Whaling Commission (IWC) moratorium on commercial whaling (see JEI Report No. 45B, November 30, 1984). After losing the initial hearing (see JEI Report No. 10B, March 15, 1985), the Justice Department won an expedited appeals hearing. The May 16 hearing gave judges the chance to question the legal foundations of each side's case. According to observers, the judges asked few questions, suggesting that the legal issues are clear. They did, however, quiz Justice Department lawyers on the impact of different decisions. This has led some to believe that the court has already made up its mind in favor of the U.S. government and is seeking the best wording for its decision. Observers are quick to point out that the case is not over until a decision is handed down, possibly as early as mid-June.

As the United States was arguing that Japanese fishing boats ought to be allowed to fish American waters, it was cutting Japan's fishing quota. The amount of ground fish Japanese fishermen will be allowed to take in the Gulf of Alaska in 1985 was cut drastically to 2,597 metric tons, 90 percent below last year's total. Officials have not provided a clear reason for the cut, leading Japanese authorities to speculate that the Americans are unhappy about negotiations to purchase U.S. fish products. Others point out that the overall foreign fishing quota is down sharply from last year. In any case, the announcement will have only a small impact on Japan's total quota in U.S. waters, which stands at 529,000 metric tons for the January to April period.

More than ever before, the fortunes of Japanese fishermen are determined by political considerations. Nonetheless, Japan will continue to rely on the sea for a major portion of its nutritional needs.

Jon Choy

Beijing Concerned Over Booming Trade With Tokyo

In a surprising turn of events, Japanese traders and Chinese officials are expressing some concern over the boom in bilateral trade. The object of concern is China's skyrocketing bilateral trade deficit. The red ink just four months into 1985 already surpasses the deficit for all of 1984. Combined with the rapidly increasing number of import contracts and joint ventures, the trend has cast doubt on China's ability to pay its bills. Although Chinese officials insist that the country's reserves of foreign currency are more than adequate, they too are concerned over the widening imbalance.

In 1984, China bought $1.3 billion more than it sold to Japan as total trade reached a new record of $13.2 billion (see JEI Report No. 12B, March 29, 1985). By the end of April 1985, however, Peking had already accumulated a trade deficit of over $1.5 billion on less than half of 1984's total volume ($5.8 billion). The shortfalls in January ($182 million) and February ($302 million) were in line with monthly figures for the last half of 1984, but the differences in March ($605 million) and April ($452 million) were substantially higher.

The trend toward a widening trade imbalance became marked in July 1984, when Japan's exports rose to $561 million from $500 million the month before; by December, shipments had hit almost $1.1 billion. Since January of this year, when exports to China totaled $710 million, monthly totals have gone as high as $1.1 million (April). China's exports to Japan, on the other hand, have fluctuated in a narrow band between $475 million and $535 million, except for August 1984, when they totaled $586 million and April 1985, when they hit $634 million.

Most of the export increase is due to expanded shipments by Japanese electronics manufacturers. Sales to China for all major consumer electronics goods at least doubled in fiscal 1984 from the previous year (see accompanying table). Automotive manufacturers also racked up significant gains. An upsurge in joint ventures has also put a strain on foreign currency holdings, as China bought plant equipment and technology from the West.

Japanese Companies' Exports to China*

(in billions of yen)

	FY 1983 (Actual)	FY 1984 (Estimated)	FY 1985 (Projected)
Electric Machinery			
Hitachi, Ltd.	Y38.0	Y99.0	Y160.0
Toshiba Corp.	20.0	100.0	150.0
Mitsubishi Electric Corp.	0.0	7.0	16.0
Matsushita Electric Industrial Co., Ltd.	10.0	35.0	80.0
Sharp Corp.	10.8	47.0	90.0
Sony Corp.	10.0	25.0	100.0
Sanyo Electric Co., Ltd.	13.6	25.2	100.0
Victor Co. of Japan, Ltd.	0.0	10.0	30.0
Nonelectric Machinery			
Niigata Engineering Co., Ltd.	1.7	2.7	3.6
Toshiba Machine Co., ltd.	1.3	1.5	2.0
Tsukodama K.K.	0.3	1.8	6.2
Iwata Air Compressor Mfg. Co., Ltd.	0.0	0.4	0.6
Transportation Equipment			
Toyota Motor Corp.	5.0	50.0	150.0
Nissan Motor Co., Ltd.	2.5	60.0	100.0
Honda Motor Co., Ltd.	2.0	12.0	28.0
Isuzu Motors, Ltd.	2.9	9.0	80.0
Fuji Heavy Industries, Ltd.	0.3	1.4	9.3
Hino Motor Co., Ltd.	2.3	20.8	42.4
Nissan Diesel Motor Co., Ltd.	5.8	8.7	13.5
Daihatsu Motor Co., Ltd.	0.0	3.8	5.5
Mazda Motor Corp.	0.1	5.0	7.0
Suzuki Motor Co., Ltd.	1.0	15.0	20.0
Yamaha Motor Co., Ltd.	0.0	10.0	20.0

	FY 1983 (Actual)	FY 1984 (Estimated)	FY 1985 (Projected)
Chemicals			
Kanegafuchi Chemical Industry Co., Ltd.	2.5	4.1	3.5
Daicel Chemical Industries, Ltd.	1.8	2.3	2.7
Sumitomo Chemical Co., Ltd.	12.0	12.0	12.0
Mitsubishi Cehmical Industries Co., Ltd.	4.9	4.7	5.0
Showa Denko K.K.	3.0	9.4	10.0
Steel			
Nippon Steel Corp.	180.0	210.0	230.0
Kawasaki Steel Corp.	76.0	86.0	93.0
Nippon Kokan K.K.	70.0	85.0	92.0
Sumitomo Metal Industries, Ltd.	85.0	110.0	120.0
Kobe Steel, Ltd.	35.0	40.0	44.0
Precision Machinery			
Canon Inc.	1.0	5.0	20.0
Ricoh Co., Ltd.	1.0	5.0	10.0
Sankyo Seiki Mfg. Co., Ltd.	1.0	2.1	2.7
Tokyo Keiki Co., Ltd..	1.1	1.4	1.6
Dainippon Screen Mfg. Co., Ltd.	1.9	3.8	5.0
Construction			
Taisei Corp.	0.0	20.0	30.0
Kajima Corp.	0.0	0.0	25.0
Mitsui Construction Co., Ltd.	0.0	8.0	13.0
Kumagai Gumi Co., Ltd.	0.0	0.0	20.0

*Based on orders received each year for construction companies and some estimates.

Source: Nihon Keizai Shimbun

The rapid growth of the trade gap has made Japanese trading company executives nervous and forced Chinese central planners to curb foreign currency expenditures. China's foreign currency reserves have shrunk by at least $2.3 billion since January, putting them at a $12 to $14 billion level, according to Beijing. But trading company analysts feel that reserves could be as low as $10 to $12 billion, and that new, long-term obligations are increasing very rapidly.

Both sides are responding to the worrisome trend. The Chinese are stretching out time schedules, delaying new projects, and asking foreign joint-venture partners to put up the scarce hard currency. An additional 15 percent tax on profits and new controls on foreign exchange transactions have been implemented, angering China's business partners. Because improved living standards are a highly visible result of the controversial economic reforms Beijing is promoting, imports of televisions, radios and other luxury goods will not be cut off, but officials have begun to monitor imports and crack down on Chinese traders who illegally divert hard currency to pay for consumer goods.

Japanese trading companies have managed to encourage several Japanese banks to increase the lines of credit extended to Chinese companies. Total credit available, which amounted to approximately $1.8 billion in March 1984, has grown to over $2.5 billion. Generally, the funds are being spent on construction projects, including hotels and trade centers. China's debt was an estimated $4 billion at the end of 1984, mostly from international financial institutions including the World Bank.

At a meeting of the Asian Development Bank (ADB) in April, both Japan and China demonstrated a new willingness to cooperate. Peking has been seeking a seat in the ADB, but the issue of Taiwan's membership has blocked progress. At the Bangkok meeting, however, China softened its stance, and Japan called for China's admission. The ADB is a major source of "soft" loans for developing countries in the region, and China would certainly like to get a piece of the action.

Chinese officials will face severe difficulties in restraining the demand for foreign currency if ambitious modernization goals are to be achieved. The nation's oil companies plan to buy 150 rebuilt oil rigs this year, and as many as 1,000 during the next few years. Complementing this equipment-buying spree, officials are negotiating with foreign oil companies to explore the vast interior regions of the country. U.S. firms are also competing to refurbish the multitude of small industrial plants throughout China, which could mean significant sales. All this adds up to quite a tidy sum. Despite the concerns over China's ability to pay its debts, however, the outlook remains bright. As the possibility of selling a product to every person in China becomes more realistic, foreign companies will devote more resources to the market. Japan is in a prime position to take advantage of this trend.

Jon Choy

Tanaka Condition Muddies Political Scene

Japan is buzzing again over the health of former prime minister Kakuei Tanaka, who has been hospitalized since February after suffering a severe stroke that has left his supporters and political dependents in a state of uncertainty. Recent developments suggest conflicting possibilities as Japan ponders the strength of the Liberal Democratic Party's "kingmaker."

News dailies flashed frontpage headlines recently that Mr. Tanaka had been temporarily released from the hospital. Details were slim, but it appears that the former premier was allowed to go home for a few days before returning for continued treatment and rehabilitation. Public concern over his condition was demonstrated in reports that Mr. Tanaka said a few words during an intimate gathering on the occasion of his 68th birthday.

Leaks over Mr. Tanaka's short return home -- if it indeed took place -- apparently were designed to remind supporters and opponents alike that the head of the LDP's largest faction is sensitive to his diminished authority and to potential challenges to his leadership. The two or three months that were initially forecast for a full recovery have long since passed, fueling

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HIGH-TECH INDUSTRIES AND THE STRUCTURE OF FOREIGN TRADE
A STUDY BY MICHIAKI KAWANO OF THE BANK OF TOKYO*

Summary

Japan finally pulled within bumping room of West Germany as the non-communist world's second-biggest exporter in 1984 and, in the process, gained ground on the United States. The key to this development, the Bank of Tokyo's Michiaki Kawano argues in the following article, is the more rapid adaptation of Japan's industrial structure to the changing realities of international competition. High-technology sectors, particularly in the electronics and precision instrumentation fields, are increasingly displacing old-line industries like steel and textiles as the engine of Japanese industrial expansion. While the continuation of this process is pivotal to the future health of the Japanese economy, it could put Japan on a more frequent collision course with the United States and other industrialized nations.

Introduction

Japan's trade and current accounts have shown consistent surpluses since the emergence of a global economic recovery in 1983. The trade surplus reached $31.5 billion in 1983 and $41.4 billion in 1984. The current account surplus amounted to $20.8 billion in 1983, rising to $35 billion in 1984.

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*Reprinted from Tokyo Financial Review, April 1985.

A number of external factors have been involved in the development of these massive surpluses. Prominent among them are the rapid growth of the American economy, the trend toward a strong dollar and a weak yen, and the decline in oil prices. Internal factors have also been involved, notably the vigorous growth of high-tech industries in Japan, a development with important structural implications. High-tech industries tend to be based on production technology systems introduced subsequent to the oil crises. By specializing in high-tech fields, Japan is in the process of building an extremely efficient economic structure.

Below we will examine the expansion of high-tech industries in Japan. After clarifying the resultant changes that are occurring in the structure of Japan's foreign trade, we will discuss some implications and problems.

What Are High-Tech Industries?

1. Contemporary High-Tech Industries

The term high-tech industry is generally used to refer to any industry that is based primarily on sophisticated technology. Unlike industries of earlier eras similarly dependent on the vanguard technologies of the time, contemporary high-tech industries are expected to become mainstays of the economy during the 1980s and the 1990s. Not long ago advanced technology was associated with so-called big science, or science and technology used in major government and military projects in such fields as aeronautics, space, nuclear power, and nuclear fusion research. Science and technology in these fields entail huge investments of money, human resources, and facilities. In part because applications are limited, developments in these fields have had little relevance to civilian industries.

In contemporary high-tech industries, however, the results of development programs are finding immediate application in the civilian sector. The range of applications is extremely broad, and new developments are profoundly affecting daily life.

Typical of these high-tech fields is the electronics industry. The appearance of sophisticated, miniaturized electronics devices at increasingly low prices has created a growing range of applications in various industries, such as machinery, medicine, telecommunications, and data processing. Each new demand category stimulates further expansion in the size of the market.

What specific industries are currently included in the high-tech category? Existing high-tech industries, including those still in their infancy, might be cataloged as follows:

a. Electronics (telecommunications, office and factory automation, electromechanics, medical electronics, optoelectronics)

b. New materials (amorphous materials, new ceramics, functional macromolecules, single crystals, fibers, new alloys)

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c. Biotechnology (pharmaceuticals, agrichemicals, fertilizers, foods, biomass)

Industries in the electronics category have already taken off and are now in a high-growth phase. The new materials industries are about to take off, and biotechnology is expected to get off the ground during the late 1990s. Most existing successful high-tech industries, accordingly, are in the electronics field. These industries include electric machinery and other industries producing machinery and equipment.

2. Characteristics of High-Tech Industries

A study of the characteristics of high-tech industries reveals first that these industries tend to be based on production technology systems that emerged after the oil crises. They have all achieved substantial improvements in energy and resource consumption and productivity, and they have also developed the potential to manufacture wide varieties of products in small quantities.

Second, the pace of innovation in these industries is extremely rapid, with the result that they face an extremely heavy burden of capital investment and research and development costs. This feature has necessitated innovative changes in the area of business management.

Third, the border between civilian and military applications is blurred. Modern military applications demand sophisticated telecommunications and control systems. The electronics hardware used in military equipment is almost identical in technical level to the hardware used in home and commercial appliances.

Fourth, high-tech industries are expected to have an impact comparable to the industrial revolution. For example, innovations in the field of electronics have led to a number of dramatic changes, including office and factory automation, the advent of new media, and spectacular progress in telecommunications. Links with other fields are spawning a variety of new industries engaged in electromechanics, medical electronics, and optoelectronics. In addition to these obvious effects on the structure of industry, electronics innovations are also producing changes in employment systems, the quality of labor, life styles, value systems, and social institutions.

The industrial revolution led to changes in the structure of industry as old industries gave way to new ones. This in turn altered the hierarchy of comparative advantage among the advanced nations, and the resultant changes in the structure of foreign trade were the vehicle for shifts in international economic and political systems. If today's high-tech industries can indeed have an impact comparable to the industrial revolution, we should already be able to detect signs of change. Let us now consider recent trends in the structure of Japan's industry and the pattern of its foreign trade.

Structural Changes in Industry and Foreign Trade

1. Expansion of High-Tech Industries

An analysis of shifts in production trends during the 1970s and 1980s shows that changes have been particularly marked during the 1980s (Table 1). The outbreak of the first oil crisis in the autumn of 1973 was accompanied by dramatic declines in the output of almost all industries. This downturn was particularly marked in the areas of ceramics and earthenware, textiles, and nonelectric machinery, with the result that 1975 production figures were lower than those in 1970.

A period of expansion then commenced, lasting until the second oil crisis of 1979-80. The pace of expansion was particularly rapid in the machinery industries, but at this stage the gaps between industries were not large.

The gaps tended to become more pronounced after the second oil crisis. Production stagnated in such materials industries as steel, nonferrous metals, textiles, chemicals, ceramics and earthenware, and paper and pulp. The slump was particularly marked in the traditional mainstay industries of steel and textiles, where output levels were still below their previous peaks even in 1984.

Production of electric machinery and precision instruments, however, expanded smoothly. Particularly in the electric machinery industry, output almost doubled over the five-year period between 1980 and 1984. Obviously the rapid gains made by this industry were attributable to advances in electronics.

Trends in capital investment in plant and equipment will be the most important factor influencing future changes in the structure of Japanese industry. Instead of examining the share of high-tech industries in overall capital investment, here let us look at the level of investment in high-tech facilities in broad industrial categories. In this way we can evaluate the ripple effects of high-tech industries on other sectors, or in other words, the degree to which each sector is introducing high-tech innovations. The source of the data is a questionnaire survey conducted in August 1984 by the Japan Development Bank.

According to the results of this survey (Table 2), high-tech capital outlays accounted for 22.4 percent of total plant and equipment spending planned by all industries for fiscal 1984 (April 1984 to March 1985). Although this percentage is still low, it represents a 31.3 percent growth rate in high-tech spending. Moreover, its contribution to the growth in overall capital investment during fiscal 1984 is a high 56.2 percent.

The highest level of high-tech investment occurred in the processing and assembly industries, with a share of 39.9 percent of total capital investment. This represents a growth rate of 50.6 percent and a 66.8 percent contribution to the growth in capital investment in these industries.

It is also interesting to note that apart from the steel industry, in which capital investment declined below the fiscal 1983 level, the materials industries also recorded a high level of high-tech investment, with a growth rate of 34.7 percent, accounting for a 25.1 percent share of the total and a 34.0 percent contribution to investment growth. This trend reflects the efforts of these industries to expand into high-tech areas as a tactic to offset slackening growth rates for their mainstay products and increasing competition from overseas industries.

These trends are indicative of the major changes that have taken place in the structure of Japanese industry, particularly after 1980, as a result of the expansion of high-tech industries. Since changes in the structure of industry are also manifested as changes in the structure of foreign trade, at this point it will be interesting to consider how the patterns of foreign trade among the major advanced nations have altered.

2. Changes in the Structure of Foreign Trade

Let us first examine the trends in the exports of the world's three main exporting nations: Japan, the United States, and West Germany.

There was little significant divergence in the trade performance of these three countries between 1970, prior to the first oil crisis, and 1980, at the end of the second oil crisis (Table 3). The value of Japan's exports increased 6.72-fold during this period, giving Japan a slight edge compared with the United States (5.11-fold) and West Germany (5.63-fold).

After 1980, however, the divergence became marked. Japan registered a decline in its exports in 1982 as a result of the simultaneous global recession, but it was back on a growth trend by the following year, recording a sharp gain of 15.8 percent in 1984.

The United States recorded declines in both 1982 and 1983, then returned to a growth trend in 1984 with a gain of 8.6 percent. West Germany's export statistics have continued to stagnate since 1980, showing little significant growth. (In Deutsche mark-denominated terms, however, there were gains of 1.1 percent in 1983 and 12.9 percent in 1984.) As a result, Japan has reached the same level as West Germany in the total value of its exports and has substantially narrowed America's lead.

Next let us consider the changes in the pattern of foreign trade (Table 4). As a percentage of total Japanese exports, machinery and equipment exports rose substantially from 26.9 percent in 1970 to 43.6 percent in 1984. Transport machinery exports also expanded, moving from 17.2 percent to 26.8 percent over the same period. By contrast, steel, textiles, and chemicals all registered relative declines. These trends are indications of the major changes that have occurred in the structure of Japan's export trade since the first oil crisis.

Since 1980 a gap has emerged between the machinery and equipment industry and the transport machinery industry. Whereas machinery and equipment exports have risen from 37.1 percent of total exports in 1980 to 43.6 percent in 1984, an increase of 6.5 percent, the share of transport machinery exports has remained virtually static because of a structural recession in the shipbuilding industry and voluntary curbs on auto exports to the United

States. This means that the machinery and equipment industry has accounted for the lion's share of the growth in Japan's exports since 1980, contributing 64.6 percent to the total increase recorded during this period.

Although dramatic changes have thus occurred in the structure of Japan's export trade, there have been few significant shifts in the export structures of the United States and West Germany. Like Japan, both countries suffered declines in the relative size of their steel and textile export industries. Exports by the machinery and equipment industry in America have remained static at around 30 percent of total exports, while the export share of the same industry in West Germany fell from 34.6 percent of the total in 1970 to 30.5 percent in 1982.

A comparison of machinery and equipment exports in terms of value reveals that Japan advanced from roughly half the American and West German levels in 1970 to replace the United States in the top position in 1983. Moreover, Japan is continuing to record double-digit annual growth in its exports of these products, further widening its lead over the United States and West Germany.

From this we can conclude that Japan's success in maintaining export growth during the upheavals that followed the oil crises was the result of an early commitment to the massive growth potential of the machinery and equipment industry, a decision that enabled Japan to strengthen its comparative advantages in this sector. The United States and West Germany were comparatively slow to pursue a similar shift in the structure of their industry, and consequently they suffered a slowdown in the growth of their overall exports.

As we have already seen, today's high-tech industries are concentrated within the machinery and equipment categories, particularly the electric machinery industry. The foregoing trends also mean, accordingly, that Japan's comparative advantages in high-tech industries have been growing.

The total value of Japan's imports is still below the peak recorded in 1981. Although declines in the prices of oil and other primary resources represent the major direct cause of this trend, another fundamental cause is the change in the structure of Japanese industry. With the growth of high-tech industries, the industrial sector's ratio of resource and fuel inputs to total inputs has been on a declining trend. This has led to the emergence of an industrial structure that produces massive surpluses in the trade and current accounts, and it has also significantly boosted Japan's influence on the world economy.

The Future of Japanese Industrial Society

Thus far we have examined the growth of high-tech industries in Japan and the changes they have worked on the structure of Japan's foreign trade. The evidence clearly points to a strengthening of Japan's comparative advantages in the high-tech field, leading to a dramatic expansion of its share of world markets.

In view of the enormous growth potential of high-tech industries, obviously the strengthening of Japan's comparative advantages in these industries should be a key priority of growth strategy in the post-oil-crisis world economy. But if implemented without regard for Japan's trading partners or the harmony of the world economy, this strategy may lead to expanding trade imbalances. In particular, it may escalate clashes of interest with the United States.

Another key priority for Japan, therefore, is the creation of a system geared toward the harmonious development of both the Japanese economy and the world economy, particularly as represented by the U.S. economy. The most effective means of attaining this goal is to push Japan further along the road to internationalization.

Internationalization can be divided into its external aspects, such as capital exports and technology transfers, and its internal aspects, such as liberalization of Japan's domestic market.

There have been some changes in emphasis in terms of the external aspects. In fiscal 1983, for example, the electric machinery industry became the largest contributor to direct overseas investment by the domestic manufacturing sector, in the process ousting the previous leader, the auto industry. The electric machinery industry's overseas investments in the United States have been exceptionally brisk, multiplying about 2.5 times between fiscal 1982 and fiscal 1983.

Such sharp changes contrast with the developments relating to internal aspects in the form of liberalization of Japan's market. Here there is an urgent need to achieve more results. The United States in particular is pressing for freer access to market sectors in which its own industries enjoy a comparative advantage and future growth prospects, notably telecommunications, data processing, medical equipment, pharmaceuticals, finance, and services. Japan will need to exercise enlightened judgment and base its response on the long-range perspective.

Japanese industrial society is on the threshold of a new era of development in which the main priorities will be internationalization and the shift to a high-tech industrial structure. These changes are expected to make the Japanese economy an increasingly significant force in the world economy. The role that Japan will need to play in the development of the world economy will grow correspondingly.

* * * * * *

Table 1: Indexes of Industrial Production

(1980 = 100)

Year	Total	Steel	Nonferrous Metals	Nonmetallic Mineral Products	Chemicals	Paper and Pulp	Textiles	Nonelectric Machinery	Electric Machinery	Transport Equipment	Precision Instruments
1970	66.9	75.3	66.7	76.3	50.9	73.1	97.1	66.6	42.9	56.3	29.4
1971	68.6	73.0	68.1	77.4	64.3	74.9	100.9	64.3	43.7	62.4	29.5
1972	73.6	78.9	77.1	82.7	68.2	79.5	102.2	64.8	49.6	69.1	31.5
1973	84.6	94.9	91.4	95.5	77.3	88.9	109.3	81.8	60.1	79.5	35.9
1974	81.2	93.4	80.1	88.4	77.1	84.7	97.8	80.0	58.1	80.4	39.6
1975	72.3	79.9	71.1	75.5	70.1	74.5	92.2	63.4	49.2	76.9	36.6
1976	80.4	87.6	84.8	83.3	78.2	84.4	100.0	69.6	63.1	78.6	46.9
1977	83.7	86.4	88.9	87.0	82.2	85.9	98.4	74.0	67.2	81.7	60.7
1978	89.0	88.8	95.5	92.0	92.3	91.8	99.8	81.3	76.3	80.4	68.7
1979	95.5	98.4	100.1	97.7	100.5	99.5	101.4	91.7	86.8	83.7	80.4
1980	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	101.0	93.6	95.8	94.1	99.8	94.4	98.4	102.2	113.9	105.8	109.4
1982	101.3	91.4	92.6	91.5	102.5	97.1	97.4	100.6	125.2	99.1	103.5
1983	104.9	89.1	95.5	92.7	108.8	102.7	96.8	99.8	149.6	94.6	110.3
1984	116.5	98.3	100.4	95.9	118.0	108.0	99.0	113.0	193.6	104.2	127.8

Source: Ministry of International Trade and Industry, Industrial Statistics Monthly

Table 2: Trends in High-Tech Capital Outlays in 1984

(construction basis)

	Growth Rate of Overall Capital Investment	Growth Rate of High-Tech Capital Outlays	Share of High-Tech Capital Outlays in Total	Contribution of High-Tech Capital Outlays to Growth of Overall Capital Investment
All Industries	10.5%	31.3%	22.4%	56.2%
Materials Industries*	8.2	35.5	18.2	63.2
Materials Industries (excluding steel)	23.5	34.7	25.1	34.0
Processing and Assembly Industries**	25.1	50.6	39.9	66.8
Nonmanufacturing Industries	10.9	13.5	16.5	37.3

Notes: *Textiles, paper and pulp, chemicals, nonmetallic mineral products, steel and nonferrous metals.
**Food, nonelectric machinery, electric machinery, transport equipment and precision instruments.

Source: Questionnaire survey by the Japan Development Bank (surveyed in August 1984)

Table 3: Export Trends for Japan, United States and West Germany

(in millions of dollars)

	1970	1975	1980	1981	1982	1983	1984
Japan	$19,318	$55,754	$129,807	$152,030	$138,831	$146,927	$170,126
	├──	(6.72%)	──┤	(17.1%)	(-8.7%)	(5.8%)	(15.8%)
United States	43,224	108,050	220,786	233,739	212,275	200,538	217,865
	├──	(5.11%)	──┤	(5.9%)	(-9.2%)	(-5.5%)	(8.6%)
West Germany	34,228	90,176	192,861	176,090	176,435	169,440	171,546
	├──	(5.63%)	──┤	(-8.7%)	(0.2%)	(-4.0%)	(1.2%)

Note: Figures in parentheses show year-to-year growth.

Sources: 1970-80 - Bank of Japan, Statistics of International Comparison; 1984 - preliminary data released by each country.

Table 4: Changes in Export Structure of Japan, United States and West Germany

(in millions of dollars)

	Food	Materials and Mineral Fuels	Chemicals	Steel	Textiles	Machinery*	Transport Equipment	Other Manufactures	Total
Japan									
1970	$648	$401	$1,234	$2,844	$1,744	$5,191	$3,318	$3,784	$19,318
	(3.4%)	(2.1%)	(6.4%)	(14.7%)	(9.0%)	(26.9%)	(17.2%)	(19.6%)	(100.0%)
1975	760	1,094	3,885	10,165	2,903	15,277	14,138	6,780	55,754
	(1.4%)	(2.0%)	(7.0%)	(18.2%)	(5.2%)	(27.4%)	(25.4%)	(12.2%)	(100.0%)
1980	1,589	2,103	6,619	15,454	5,123	48,199	34,150	14,956	129,807
	(1.2%)	(1.6%)	(5.1%)	(11.9%)	(3.9%)	(37.1%)	(26.3%)	(11.5%)	(100.0%)
1982	1,404	1,766	6,238	15,645	5,104	53,789	37,762	15,587	138,831
	(1.0%)	(1.3%)	(4.5%)	(11.3%)	(3.7%)	(38.7%)	(27.2%)	(11.2%)	(100.0%)
1983	1,399	1,100	6,982	12,843	6,613	60,417	39,143	11,364	146,927
	(0.9%)	(0.7%)	(4.8%)	(8.7%)	(4.5%)	(41.1%)	(26.6%)	(7.7%)	(100.0%)
1984	1,440	1,249	7,550	19,168	6,755	74,253	45,556	12,474	170,126
	(0.8%)	(0.7%)	(4.4%)	(11.3%)	(4.0%)	(43.6%)	(26.8%)	(7.3%)	(100.0%)
United States									
1970	5,058	6,693	3,826	1,270	600	12,681	6,357	4,636	43,224
	(11.7%)	(15.5%)	(8.9%)	(2.9%)	(1.4%)	(29.3%)	(14.7%)	(10.7%)	(100.0%)
1975	16,797	15,193	8,705	2,457	1,625	31,716	16,533	9,988	108,050
	(15.6%)	(14.1%)	(8.1%)	(2.3%)	(1.5%)	(29.4%)	(15.3%)	(9.2%)	(100.0%)
1980	30,318	33,705	22,430	3,116	3,632	62,520	25,131	24,264	220,786
	(13.7%)	(15.3%)	(10.2%)	(1.4%)	(1.6%)	(28.3%)	(12.7%)	(11.0%)	(100.0%)
1982	26,856	33,542	19,906	2,166	2,784	68,406	27,060	19,555	212,275
	(12.7%)	(15.8%)	(9.4%)	(1.0%)	(1.3%)	(32.2%)	(12.7%)	(9.2%)	(100.0%)
1983	26,979	29,555	19,751	1,415	2,368	60,165	28,269	20,459	200,538
	(13.5%)	(14.7%)	(9.8%)	(0.7%)	(1.2%)	(30.0%)	(14.1%)	(10.2%)	(100.0%)
West Germany									
1970	1,066	1,944	4,093	2,530	1,494	11,832	5,110	5,596	34,228
	(3.1%)	(5.7%)	(12.0%)	(7.4%)	(4.4%)	(34.6%)	(14.9%)	(15.3%)	(100.0%)
1975	3,671	5,222	10,477	7,971	3,256	31,242	12,979	13,724	97,176
	(4.1%)	(5.8%)	(11.6%)	(8.8%)	(3.6%)	(34.6%)	(14.4%)	(15.2%)	(100.0%)
1980	9,261	12,080	24,318	11,551	6,352	60,707	30,714	33,281	192,861
	(4.8%)	(6.3%)	(12.6%)	(6.0%)	(3.3%)	(31.5%)	(15.9%)	(17.3%)	(100.0%)
1982	9,070	10,448	21,185	9,819	5,572	53,780	34,020	28,334	176,435
	(5.1%)	(5.9%)	(12.0%)	(5.6%)	(3.2%)	(30.5%)	(19.3%)	(16.0%)	(100.0%)

*Nonelectric machinery, electric machinery and precision instruments.

Sources: 1970-82 - calculated from Bank of Japan, Statistics of International Comparison; 1983 - Ministry of International Trade and Industry, White Paper on Commerce; and 1984 - preliminary report by Ministry of Finance.

NOTE

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EPA Reports Solid Economic Growth, Possible Pitfalls

Japan's Economic Planning Agency (EPA) recently reported that the Japanese economy remains on a path of moderate growth, but warned that there is a distinct possibility of a slowdown in fiscal 1985 (April 1, 1985-March 31, 1986). Statistical evidence shows growth spread more evenly throughout the economy as Japanese corporations turned in excellent performances in fiscal 1984. Although this has led to bullish investment plans, the economy is still plagued by a weakness in domestic demand and remains dependent on foreign trade service, as well as new services. In cooperation with NEC Corp., Hitachi, Ltd., Fujitsu, Ltd. and Nihon Keizai Shimbun Inc., NTT will offer a nationwide value-added network through a joint venture, Internetwork Planning Inc. On the international front, NTT International, a new NTT subsidiary, will seek foreign partners for overseas projects. Despite previous work with the semi-governmental Japan Telecommunications Engineering and Consulting Co., Ltd. on international orders, Mr. Shinto admitted that NTT "lacks the capability for big international ventures." The new subsidiary hopes to capitalize on the parent company's experience in planning and construction supervision, while drawing on the marketing expertise of foreign firms. The new NTT seems to be breaking the habits of its public monopoly past quite quickly.

Jon Choy

The Deteriorating U.S. Trade Account: Is The Worst Over?

This country's yawning trade gap exacted a heavy toll on the U.S. economy in 1985's first quarter, knocking 3.3 percentage points off the growth of inflation-adjusted gross national product. At $27.4 billion, the merchandise trade deficit on a clearance basis (exports f.a.s., imports Customs value) was $4.1 billion bigger than in the October-December 1984 period and $1.8 billion larger than in the year-earlier quarter. Exports continued to buck the demand-dampening effects of the high-flying dollar and sluggish economic growth abroad, but the January-March 1985 increase of 4.4 percent to $56.2 billion was the smallest gain in five quarters. Imports, paradoxically, expanded in 1985's first three months by the slimmest margin in eight quarters, rising just 5.2 percent to $83.5 billion because of a drop in oil imports and a markedly slower increase in purchases from Canada and the European Community.

While stiff import competition will wreak havoc on U.S. manufacturers' business results for the rest of 1985, economists expect the trade account to be much less of a drag on growth than it was in the January-March period. Current projections peg the trade deficit at only $10 billion to $15 billion above 1984's $107.8 billion red-ink tally, mainly because the anticipated slowdown in domestic growth this year will limit the expansion of imports.

Unlike 1984, worsening trade results with Japan could account for most of the erosion in the U.S. trade account this year. In fact, the bilateral deficit could easily jump by $10 billion to $44 billion. In just the opening quarter of the year, $2.9 billion was added to this country's red-ink entry with Japan, pushing it to $10.2 billion. Shipments to Japan outperformed total U.S. exports -- but so did imports, which climbed five times faster than aggregate purchases (see accompanying tables).

Susan MacKnight

U.S. Exports to Japan

(in millions of dollars, f.a.s. value basis)

	January-March 1984	January-March 1985	Percent Change
Total Exports	$5,694.9	$6,252.3	9.8%
Industrial Supplies	2,225.4	2,434.5	9.4
Bituminous Coal	277.9	231.2	-16.8
Petroleum Products	104.6	217.5	107.9
Natural Gas	72.9	72.4	-0.7
Nuclear Fuels	24.1	42.7	77.2
Logs and Lumber	201.0	215.2	7.1
Paper Base Stocks	132.7	123.8	-6.7
Paper and Paper Products	66.5	67.6	1.7
Organic Chemicals	177.7	183.2	3.1
Inorganic Chemicals	112.2	256.8	128.9
Plastics and Synthetic Resin Compounds	91.5	80.1	-12.5
Fertilizers and Insecticides	86.6	90.8	4.8
Steel Scrap	62.3	52.5	-15.7
Nonferrous Ores and Scrap	91.7	110.1	20.1
Nonferrous Metals	136.7	91.3	-33.2
Textiles	26.7	31.3	17.2
Raw Cotton	184.5	183.9	-0.3
Hides and Skins	81.2	69.8	-14.0
Leaf Tobacco	40.0	40.0	0.0
Food and Feed	1,476.8	1,213.7	-17.8
Corn	553.7	371.8	-32.9
Sorghum	96.1	105.4	9.7
Soybeans	298.4	246.5	-17.4
Wheat	111.9	118.1	5.5
Fruits and Vegetables	106.7	103.8	-2.7
Meat and Meat Products	164.2	130.0	-20.8
Fish and Fish Products	50.8	52.7	3.7
Capital Goods	1,335.7	1,736.3	30.0
Nonelectric Machinery	831.3	932.7	12.2
Data Processing Equipment	246.6	370.4	50.2
Measuring, Testing and Control Instruments	116.4	136.3	17.1
Laboratory Testing and Control Instruments	25.6	31.0	21.1
Scientific, Professional and Medical Equipment	64.8	69.8	7.7
Power Generating Equipment (excl. aircraft and automotive engines)	101.7	16.2	-84.1
Oil and Gas Field Equipment	16.5	9.3	-43.6
Metalworking Equipment	19.5	29.7	52.3
Service Industry Equipment	27.3	30.6	12.1
Electric Machinery	218.7	236.5	8.1
Generators and Transformers	26.3	20.4	-22.4
Broadcast and Communications Equipment	113.1	102.1	-9.7
Telephonic and Other Electric Equipment	79.3	114.0	43.8

Transportation Equipment	285.7	567.1	98.5
Civilian Aircraft	90.1	355.8	294.9
Civilian Aircraft Engines and Parts	109.3	138.4	26.6
Automotive Parts	45.5	44.1	-3.1
Consumer Goods	354.8	368.4	3.8
Pharmaceuticals	134.8	155.2	15.1
Toys and Sporting Goods	25.0	23.2	-7.2
Cigarettes	25.2	21.5	-14.7

U.S. Imports from Japan

(in millions of dollars, Customs value basis)

	January-March 1984	January-March 1985	Percent Change
Total Imports	$13,006.2	$16,493.4	26.8%
Capital Goods	4,295.3	5,529.2	28.7
Nonelectric Machinery	2,968.1	3,750.8	26.4
Business Machines	1,528.9	1,748.4	14.4
Metalworking Machinery	195.7	292.1	49.3
Agricultural Machinery	95.4	101.5	6.4
Specialized Industrial Machinery	299.6	313.4	4.6
Scientific, Professional and Medical Equipment	109.3	147.7	35.1
Electric Machinery	1,278.0	1,710.1	33.8
Transportation Equipment	49.2	68.3	38.8
Automotive Products	4,207.3	5,380.5	27.9
Passenger Cars	2,850.2	3,326.6	16.7
Trucks	571.7	983.6	72.0
Automotive Parts	785.3	942.7	20.0
Consumer Goods	2,516.7	3,449.4	37.1
Video and Audio Recorders and Players and Stereo Equipment	762.5	1,302.7	70.8
Television Sets	137.3	190.8	39.0
Radio Receivers	67.2	82.3	22.5
Tableware and Glassware	96.3	109.4	13.6
Metal Cookware and Cutlery	93.8	98.0	4.5
Photographic and Optical Goods	243.6	242.8	-0.3
Clocks and Watches	82.6	114.6	38.7
Toys and Sporting Goods	97.0	118.3	22.0
Motorcycles and Parts	208.2	224.1	7.6
Clothing	133.0	132.1	-0.7
Intermediate Goods	1,779.4	1,865.8	4.9
Steel Mill Products	720.0	867.6	20.5
Nonferrous Metals	129.8	126.2	-2.8
Organic Chemicals	116.3	151.0	29.8
Tires and Tubes	142.6	144.8	1.5
Textiles	177.7	174.0	-2.1

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REPORT

NO. 22A

June 14, 1985

U.S. IMPORTS FROM JAPAN: A REVIEW OF 1984 SALES

Summary

Vigorous domestic economic growth and the high-flying dollar blew the lid off imports from Japan in 1984, pulling purchases up 38.7 percent to $57.1 billion. Capital goods expanded by a once-unimaginable 62.2 percent to $19.3 billion, but this end-use category represented just the cutting edge of imports made in Japan. Purchases of automotive products picked up some more steam, increasing 23.9 percent to $18.5 billion. So did imports of consumer goods, which climbed 35.8 percent to $11.3 billion. Moreover, shipments of intermediate goods reversed course, advancing 35 percent to $7.3 billion.

Import Profiles

Capital Goods - The competitive pressures of the American market in the mid-1980s have forced U.S. manufacturers to spend heavily on new plant and equipment to improve efficiency. This prod has turned business investment into a driving force in the current recovery, with capital spending kicking in almost a third of the economy's 1984 expansion. But to the dismay of domestic producers of capital goods, their foreign rivals, aided by the mighty dollar, siphoned off perhaps as much as two-fifths of the jump in equipment purchases. More often than not, these overseas suppliers were Japanese companies.

According to some rough calculations, purchases of high technology products accounted for approximately half of all U.S. equipment spending last

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year. This investment pattern was tailor-made for Japanese companies, which parlayed their prowess in product and manufacturing technologies as well as the competitive edge the strong dollar gave them into huge sales gains. Take computers for example. Purchases of Japanese-made data processing equipment and parts climbed 78.9 percent to $3.2 billion after more than doubling in 1983. Once again, indirect evidence suggests, imports were fueled by peripherals for personal computers. Explosive U.S. sales of personal computers, especially business-oriented systems, played straight into the hands of Japanese makers of printers since they dominate the American market for low-end dot matrix and daisywheel printers -- and this market at least doubled in volume last year. Because disk drives for personal computers are also the type of high-volume commodity product in which Japanese suppliers excel, the boom in sales of desktop systems enabled Japanese companies to expand their already significant inroads in the market for 5.25-inch floppy disk drives and capture a bigger slice of the smaller market for 5.25-inch rigid drives. Increased shipments of terminals apparently swelled the import total as well, although Japanese manufacturers have not made the same headway in this category of peripherals as they have in printers and disk drives.

To the continued surprise of many U.S. industry watchers, the success of Japanese companies in the market for personal computer peripheral products again failed to carry over to the systems themselves. Shipments did increase as makers made a last-ditch effort to break into the American market by climbing on the IBM PC bandwagon, but this gain was possibly even less of a factor in the import surge than expanded arrivals of Japanese-made portable or knee-top computers. It definitely took a back seat to the jump in parts deliveries. Ranging all the way from individual components up to mainframe subassemblies, these parts, like many of the systems and peripherals coming in from Japan, were bought mainly by American computer makers shopping for cost-competitive sources of supply.

Deregulation and the breakup of the Bell System have made telephone equipment another major growth industry, but these same developments have also triggered a bruising battle for sales in both the commercial and residential ends of the business. With new domestic and foreign competitors still flocking into the market and established suppliers, including the leading Japanese makers of telephone equipment, continuing to jockey for position, a glut of private branch exchanges, key telephone systems and single-line telephones has developed. This inventory overhang has exacerbated the industry's long-running price wars, driving prices down to break-even levels or less. Despite repeated predictions of a shakeout among companies offering customer-premises equipment, the industry free-for-all has yet to deter Japanese manufacturers and the numerous U.S. vendors marketing Japanese-made equipment. In 1984 alone, imports of telephone equipment and parts from Japan climbed 114.3 percent to over $0.7 billion.

With sales of personal computers booming and other big semiconductor end-user industries -- mainframes, minicomputers, telecommunications equipment, industrial and consumer electronics products and military hardware -- chalking up solid shipment gains in 1984, demand for most types of memory and logic chips continued to build through the year's first half. Lead times, which had

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started to stretch in the spring of 1983, became longer, even though U.S. merchant semiconductor manufacturers placed more capacity in operation, and prices, particularly quotes on high-volume memories, firmed. These market conditions were a bonanza for merchant producers, yet the industry found little to celebrate in its 1984 sales record. For starters, semiconductor imports from Japan were up 116.2 percent to $1.8 billion-plus. Moreover, Japanese suppliers added several percentage points to their U.S. market share, mainly because of their continued edge in 64K dynamic random access memories (RAMs), the industry's biggest-selling chip, and their early lead in 256K memories. Equally worrisome to American makers was a sudden softening of demand in 1984's second half. This weakness, which primarily reflected a huge inventory buildup by overly optimistic manufacturers of personal computers, quickly dropped orders well below shipments -- the traditional signal of hard times ahead for the industry. To make matters worse, large amounts of new capacity were still coming onstream in both the United States and Japan, setting the stage for another round of deep price cutting, particularly in RAMs and other high-volume products.

With a big boost from the economy, 1984 turned into another record shipment year for both American-made copiers and models imported from Japan, which advanced 27.3 percent to $0.9 billion. Like semiconductor makers, though, Xerox Corp. and the handful of other U.S. manufacturers of copiers continued to lose market share to their Japanese competitors. Part of this erosion reflected hot sales of personal copiers -- a market Canon Inc. single-handedly created two years ago. But most of it took place in the industry's traditional low end (tabletop machines making 30 copies a minute or less), where Japanese vendors kept Xerox on the defensive by adding more convenience features to their products and pricing aggressively. The story was entirely different in mid-volume copiers. Armed with an expanding new family of sophisticated, competitively priced copiers targeted mainly at this market segment, Xerox held its ground against a fast-increasing lineup of high-performance machines from Japanese producers.

Struggling U.S. machine tool builders should have been major beneficiaries of 1984's surge in capital spending because most of this money was earmarked for plant modernization. Big outlays by automotive manufacturers and defense contractors did breathe some much-needed life into domestic machine tool orders, but bookings still fell far short of most projections. The continued slump in a number of important end-user industries was one cause of this shortfall. Equally important, American durable goods makers bought more Japanese-made equipment, which lifted imports 71.6 percent to just under $0.8 billion. For some products like small and medium-sized numerically controlled lathes and machining centers, buyers had little choice since many leading U.S. machine tool builders have conceded these commodity market segments entirely to their Japanese rivals as part of a massive restructuring drive.

Automotive Products - Any lingering doubts that the U.S. car market was back on track after its 1980-82 battering were quickly laid to rest in 1984. Helped by the second year of strong economic recovery, stable gasoline prices and improved consumer confidence, American auto makers rang up sales of 7,951,517 units, a 17 percent advance on 1983's total and the industry's best performance since 1979. For Japanese motor vehicle exporters, however, strengthening market conditions proved to a source of both frustration and relief. With the ceiling on U.S.-bound car shipments up 10.1 percent for the April 1984-March 1985 period to 1,850,000 sedans plus roughly 90,800 station wagons and four-wheel-drive vehicles and 77,000 cars for Puerto Rico, imports of Japanese-built cars increased 8.9 percent to 1,950,406 units. Yet in a development that passed virtually unnoticed amid the renewed debate on the future of the restraint arrangement, sales of Japanese nameplates slipped 0.5 percent in 1984 to 1,906,208 units and their market share dropped to a five-year low of 18.3 percent.

The cause of the sales dip was not hard to identify since it was Japanese makers' old nemesis, inadequate inventories. Total stocks of Japanese cars never got higher in 1984 than January's skimpy level of a 24-day supply, and a 20-day supply became the new definition of the inventory norm for Japanese makes. Actually, import leader Toyota Motor Corp. would have been happy if its U.S. distributors and dealers had had this much stock since inventories roughly half this size turned 1984 into a year of flat sales. Lean inventories also meant a no-growth year for Subaru of America Inc., which is supplied by Fuji Heavy Industries, Ltd. Nissan Motor Co., Ltd., the number-two import seller, and Mazda Motor Corp., however, could not even match their 1983 totals. In fact, Honda Motor Co., Ltd., alone among the five top Japanese suppliers, managed to post a sales gain, although it was also the only company to report lower sales in 1983.

Whether sales were up or not in 1984, Japanese car makers and their distributors and dealers made more money. How much is anyone's guess since none of the companies breaks out profits on its American operations. Another hike in the average U.S. selling price of Japanese makes -- estimated at $1,300 by the U.S. International Trade Commission, which pegged the 1983 jump at $831 -- offers one hint, however. The increasing tilt of Japanese product mixes toward option-loaded economy cars and luxury models provides another. Between 1982 and last year, for example, Toyota's sales of its high-end Celica, Supra, Camry and Cressida models expanded from 35.3 percent of its total retail deliveries to 43.6 percent, while Nissan's sales of the top-of-the-line Maxima, 200SX and 300ZX went from 34 percent to 42.2 percent. U.S. import data also provide a clue to how much more money Japanese car manufacturers earned in the United States in 1984 since purchases were up 20 percent to almost $12.4 billion on a shipment gain of less than half that size.

With car shipments limited, Japanese automotive makers have counted on small trucks to take up the slack in their U.S. motor vehicle sales. This plan has succeeded: sales of the five Japanese compact truck nameplates have jumped in each of the last three years. But boosting sales has been an uphill battle since General Motors Corp., Ford Motor Co. and Chrysler Corp. jumped into the small truck market in late 1981-early 1982 with the first domestically designed and manufactured compact pickups. Japanese builders in fact lost market share in both 1982 and 1983 before fighting Detroit to a standstill last year with some familiar marketing tactics. Aggressive pricing remained the key, as importers kept stickers on their price-leader trucks below $6,000 for the third consecutive year. They also continued to add new models to their lineups, expand advertising budgets and periodically offer below-market financing and other incentives.

These strategies paid handsome dividends in 1984's extremely robust U.S. truck market. Each of the five Japanese makes set sales records and combined retail deliveries soared 54.7 percent to 650,026 units (including 95,162 assembled by Nissan in Tennessee), nudging Japan's share of the American small truck market up to 37.7 percent from 37 percent in 1983. To support this sales jump, distributors worked down the generally large inventories they had carried in 1984. Imports were also increased 34.8 percent to 566,283 units, which lifted purchases 36.9 percent to just under $2.4 billion.

Consumer Goods - With consumer spending propelling the U.S. economy out of recession in 1983, sales of consumer electronics products took off. As good as that business was, it paled in comparison with shipments last year. Another big jump in purchases of durables in 1984 lifted sales of color televisions, projection TVs, home radios, portable cassette players, tape recorders and combination units to new highs. Even sales of audio components and systems, the market's most lackluster segment in recent years, broke records. Once again, though, the hottest action was in video cassette recorders (VCRs).

Plummeting prices continued to whet VCR demand, particularly in the market's big low end, where discount prices on established brands broke through the $300 barrier. New technology that makes VCRs easier to operate, more versatile and smaller also promoted the popularity of these machines. So did the spread of neighborhood video stores with their fast-expanding libraries of prerecorded programming. Against the backdrop of the consumer spending spree, these developments boosted VCR sales from some 4.1 million units in 1983 to an estimated 7.6 million units last year -- a jump paralleling imports from Japan, which topped 9.3 million units valued at $2.8 billion-plus.

Intermediate Goods - Regardless of the state of the U.S. steel market, imports of steel mill products from Japan had nowhere to go but up in 1984 after tumbling the year before to their lowest point since 1965. As it developed, market conditions continued to improve from 1982's depressed level. Demand was not as robust as the strong showing of business investment and consumer spending would have indicated, but the pickup did provide additional relief to hard-pressed American steel makers. It also pulled in more Japanese steel, which rebounded 56.5 percent in volume to 6.6 million tons and 48.8 percent in value to nearly $3.2 billion.

Higher output in the U.S. automotive industry -- steel's single largest customer -- and near-record production of appliances jacked up demand for cold-rolled, hot-rolled and coated sheets, whether produced here or in Japan. Booming construction activity also led to increased shipments of flat-rolled products, both directly and through expanded demand for building products. In addition, stepped-up construction lifted demand for domestic and imported structural shapes and wire rods. What really made the difference in the state of the U.S. steel market, however, was the upturn in oil and gas exploration and development work. This recovery turned around shipments of oil-country tubular products and large diameter line pipe from American and Japanese mills alike after a two-year slide.

Import Prospects

Although U.S. economic growth this year is certain to fall far short of 1984's strong performance, the slowdown will shave few if any points off the expansion rate of Japanese imports. A big increase is in store for automotive products since no matter what happens to truck shipments, the hike in the ceiling on Japan's U.S.-bound car exports for FY 1985 will automatically translate into large import gains. Purchases of consumer goods will also be up again by a sizable margin in response to the continued buoyancy of consumer spending. So, too, will capital goods, although scaled-back corporate investment plans for 1985 point to some moderation. In fact, the only end-use category in which there might be a noticeable dropoff in import growth is intermediate goods -- a prospect that reflects the new limits on Japanese steel shipments.

For further information, contact Susan MacKnight.

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The views expressed in this report are those of the author and do not necessarily reflect those of the Japan Economic Institute.

U.S. Imports from Japan by Commodity, 1983 and 1984

(in millions of dollars* and indicated quantity units)

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Imports 1984
Total Imports			$41,183.2	$57,135.0	38.7%	17.5%
Capital Goods			11,895.8	19,289.6	62.2	32.3
Nonelectric Machinery			7,906.8	12,891.9	63.0	35.1
Business Machines			3,789.3	6,414.6	69.3	46.4
Office Typewriters	410,450 no	632,040 no	105.8	166.3	57.2	59.6
Calculators	16,925,952 no	21,357,889 no	196.0	276.3	41.0	70.8
Cash Registers (excl. point-of-sale units)	299,936 no	396,024 no	82.6	97.0	17.4	98.3
Photocopiers and Parts			713.4	907.9	27.3	81.1
Photocopiers	542,812 no	762,703 no	575.1	723.3	25.8	79.7
Parts			138.3	184.6	33.5	87.2
Data Processing Equipment and Parts			1,780.7	3,185.4	78.9	41.4
Data Processing Equipment			1,062.8	1,873.4	76.3	53.7
Parts			717.8	1,312.1	82.8	31.3
Machine Tools and Parts			452.2	776.2	71.6	46.5
Electric Discharge Machines	548 no	841 no	21.4	38.3	79.0	63.7
Numerically Controlled Lathes	1,568 no	2,889 no	101.1	173.8	71.9	87.5
Machining Centers	1,876 no	2,813 no	155.9	238.1	52.7	92.0
Punching and Shearing Machines	872 no	1,461 no	20.7	62.3	201.0	46.3
Casting Machines Used in Metallurgy and Parts			79.8	15.6	-80.5	31.8
Farm Tractors	45,960 no	60,383 no	169.6	247.3	45.8	39.9
Under 40 Horsepower	41,265 no	50,722 no	136.2	183.0	34.4	85.9
Hydraulic Excavators and Other Excavating Machinery and Parts			112.2	368.1	228.1	37.7
Front-End Loaders	1,582 no	3,314 no	60.4	148.4	145.7	44.3
Forklifts and Other Self-Propelled Work Trucks and Parts	12,616 no	28,495 no	96.2	231.3	140.4	51.2
Conveyors, Jacks and Other Materials Handling Equipment and Parts			111.7	151.1	35.3	21.8
Conveyors (except belt type)			27.6	38.1	38.0	51.4
Hydraulic Jacks	714,816 no	518,934 no	38.4	33.6	-12.5	43.7
Textile Machinery and Parts			146.2	174.7	19.5	18.3
Commercial Sewing Machines	111,023 no	139,764 no	42.8	61.7	44.2	58.6
Weaving Machines and Parts			31.0	29.0	-6.5	12.1
Pulp and Paper Mill Machinery			23.9	26.8	12.1	9.4
Printing Equipment and Parts			66.7	134.9	102.2	23.9
Sheet-Fed Offset Printing Presses	189 no	278 no	21.1	43.9	108.1	21.3
Roll-Fed Offset Printing Presses	38 no	54 no	27.7	36.5	31.8	39.1
Machinery and Parts for Making Plastics and Rubber			23.6	65.6	178.0	19.4
Injection Molding Machinery	349 no	752 no	14.2	40.6	185.9	31.0
Industrial Equipment for Treating Materials by Temperature Change and Parts			48.2	20.2	-58.1	11.1
Airconditioning Machinery and Parts			78.5	101.5	29.3	60.2
Pumps (except for motor vehicles) and Parts			41.7	52.7	26.4	10.4
Compressors and Parts			141.3	260.8	84.6	45.7
Refrigeration and Airconditioning Compressors Under 1/4 Horsepower	575,381 no	1,769,511 no	27.5	66.6	142.2	37.2
Refrigeration and Airconditioning Compressors Over 1 Horsepower	1,604,348 no	2,393,572 no	74.9	112.9	50.7	86.2

Commodity	Quantity		Value		Percent Change	Japan's Share of U.S. Imports
	1983	1984	1983	1984	1983/84	1984
Fans and Blowers (except for motor vehicles) and Parts			$ 38.1	$ 51.7	35.7%	8.5%
Power Hand Tools			113.6	164.3	44.6	48.0
Electric Hand Tools			57.9	101.4	75.1	54.2
Tools for Hand or Machine Use			94.5	120.0	27.0	19.2
Bearings and Parts			172.7	288.9	67.3	46.0
Radial Ball Bearings			74.9	113.8	51.9	48.2
Tapered Roller Bearings			60.6	112.3	85.3	73.4
Taps, Cocks, Valves and Similar Devices and Parts			86.0	110.4	28.4	16.5
Speed Changers and Other Transmission Equipment			34.3	45.5	32.7	18.6
Small Stationary Diesel Engines and Parts			64.8	118.5	82.9	26.4
Small Stationary Gas Engines and Parts			84.6	111.5	31.8	51.6
Steam Turbines and Parts			17.9	27.4	53.1	32.2
Electromedical Apparatus and Parts			61.9	114.1	84.3	30.6
X-Ray Apparatus and Parts			51.7	57.7	11.6	12.5
Medical, Dental and Veterinary Instruments and Parts			94.1	127.3	35.3	34.0
Optical Instruments (excl. electro-optical)			52.4	76.4	45.8	72.4
Astronomical Instruments and Parts			59.0	89.5	51.7	76.3
Microscopes and Parts			37.9	51.5	35.9	45.7
Nonelectric Measuring, Checking, Analyzing and Controlling Instruments and Parts			79.1	100.7	27.3	22.0
Electric Measuring, Checking, Analyzing and Controlling Instruments and Parts			194.9	328.0	68.3	25.2
Instruments and Apparatus for Checking or Measuring Electrical Quantities			60.9	104.8	72.1	40.5
Film Processing and Printing Equipment			81.2	77.9	-4.1	49.2
Magnetic Media			400.3	542.9	35.6	75.7
Blank Audio Cassettes	47,821,527 no	66,671,006 no	50.3	76.8	52.7	54.9
Blank Video Cassettes	38,263,139 no	61,886,607 no	200.1	267.7	33.8	87.9
Blank Magnetic Video Recording Media (excl. cassettes and cartridges)			86.6	91.3	5.4	82.9
Coin or Disc Operated Game Machines			42.0	6.3	-85.0	51.1
Electric Machinery			3,756.4	6,029.4	60.5	32.2
Semiconductors			852.6	1,843.6	116.2	24.9
Discrete Devices			172.0	318.8	85.3	24.7
Transistor Parts			102.7	206.0	100.6	34.7
Integrated Circuits			680.6	1,524.8	124.0	24.9
Linear (Analog) Chips	53,583,694 no	78,933,034 no	32.3	51.5	59.4	7.1
Digital Metal Oxide on Silicon Chips	193,750,890 no	311,431,437 no	546.0	1,282.1	134.8	35.0
Digital Bipolar Chips			72.6	130.0	79.1	8.4
Chips, Dice and Wafers			77.3	149.8	93.8	49.1
Printed Circuit Boards	13,491,012 no	10,075,647 no	57.2	78.9	37.9	30.7
Capacitors			101.1	152.1	50.4	34.9
Fixed Aluminum Electrolytic Capacitors	647,351,874 no	900,924,266 no	47.7	67.8	42.1	74.8
Fixed Ceramic Capacitors	1,262,199,284 no	1,590,846,445 no	26.1	42.8	64.0	24.5
Electronic Tubes and Parts (excl. television picture tubes)			58.1	67.0	15.3	27.8
Microphones, Loudspeakers and Amplifiers and Parts			299.1	453.1	51.5	55.3
Loudspeakers	22,382,731 no	28,874,575 no	124.8	180.3	44.5	63.6
Audiofrequency Amplifiers	2,088,982 no	2,161,254 no	101.2	140.2	38.5	70.0
Television Cameras and Parts	466,965 no	846,612 no	280.1	483.7	72.7	96.7

Commodity	Quantity		Value		Percent Change	Japan's Share of U.S. Imports
	1983	1984	1983	1984	1983/84	1984
Radio Transceivers (excl. citizens' band)	305,975 no	606,711 no	$ 49.9	$125.5	151.5%	59.7%
Radar and Radio Navigational Aids and Parts			48.5	50.1	3.3	26.4
Radiotelephonic Apparatus and Parts			198.4	265.6	33.9	30.5
Telephone Apparatus and Parts			340.9	730.4	114.3	47.8
Telephone Switching Equipment and Parts			145.6	319.7	119.6	57.4
Telephone Instruments	1,908,859 no	3,125,916 no	109.9	184.8	68.2	37.6
Teleprinting and Teletypewriting Machines and Parts			67.5	115.8	71.6	82.1
Telegraph Apparatus and Instruments and Parts			62.3	100.7	61.6	63.6
Switchgear			278.3	426.4	53.2	25.7
Switches			125.3	199.1	58.9	35.7
Relays			44.0	87.8	99.5	42.4
Connectors			29.4	38.6	31.3	13.6
Rectifiers and Rectifying Equipment			56.0	79.3	41.6	15.8
Resistors			61.2	101.8	66.3	33.0
Insulated Electrical Conductors With Fittings			35.7	50.8	42.3	15.3
Electric Motors Under 1/40 Horsepower	9,363,576 no	13,672,910 no	70.1	92.6	32.1	60.9
Gasoline Engine Generators Not Over 5 Kilowatts	115,686 no	125,613 no	29.6	38.2	29.1	99.5
Welding Equipment and Parts			47.4	69.3	46.2	39.1
Batteries and Parts (excl. lead-acid batteries)			78.2	103.0	31.7	44.0
Permanent Magnets and Magnetic Workholders			45.0	59.9	33.1	50.2
Electric Signalling Apparatus and Parts			78.6	137.8	75.3	30.5
Transport Equipment			232.6	368.3	58.3	8.5
Civilian Aircraft			23.2	33.2	43.1	2.2
Aircraft Parts			138.6	120.6	-13.0	5.0
Self-Propelled Rail Vehicles	13 no	232 no	7.8	150.3	1,826.9	93.4
Parts for Rolling Stock			36.1	36.1	0.0	20.0
Automotive Products			14,919.3	18,476.9	23.9	34.5
Passenger Cars	1,791,164 no	1,950,406 no	10,293.5	12,349.9	20.0	42.2
Assembled Trucks	420,212 no	566,283 no	1,715.9	2,349.3	36.9	38.9
Automotive Parts, Accessories and Engines			2,061.3	3,205.6	55.5	20.0
Body Stampings			78.5	119.5	52.2	45.9
Bumpers			20.7	32.3	56.0	14.3
Wheels			17.0	32.3	90.0	11.0
Brakes and Parts			35.7	55.9	56.6	10.2
Transmissions			124.6	155.2	24.6	14.4
Engines and Parts			383.9	617.7	60.9	16.7
Engines			257.5	461.5	79.2	15.9
Parts			126.4	156.2	23.6	19.7
Starting and Ignition Equipment			89.8	134.2	49.4	40.3
Starting Motors			26.2	37.3	42.4	51.1
Ignition Wiring Sets			11.3	25.9	129.2	5.6
Pumps			28.0	50.1	78.9	23.8
Electric Lighting Equipment			35.0	41.0	17.1	36.4
Radios	673,265 no	883,457 no	29.6	45.6	54.1	12.4
Furniture			21.6	42.5	96.8	8.0
Snowmobiles	20,572 no	26,619 no	32.4	39.0	20.4	53.3
Golf Carts, Mopeds and Similar Vehicles	509,577 no	548,410 no	799.6	478.6	-40.1	93.7

Commodity	Quantity		Value		Percent Change 1983/84	Japan's Share of U.S. Imports 1984
	1983	1984	1983	1984		
Consumer Goods			$8,296.4	$11,265.6	35.8%	18.8%
Color Video Cassette Recorders	4,797,373 no	9,306,563 no	1,615.2	2,838.1	75.7	98.7
Video Tape Players	99,176 no	144,631 no	47.0	69.5	47.9	93.2
Assembled Color Television Receivers	912,636 no	1,405,422 no	222.9	350.0	57.0	35.0
Assembled Black and White Television Receivers	339,121 no	672,945 no	32.2	62.6	94.4	21.6
Television Combinations			16.3	29.3	79.8	15.5
Unassembled Television Receivers and Incomplete Subassemblies			167.9	271.6	61.8	30.5
Television Picture Tubes and Parts			62.9	89.5	42.3	57.6
Parts for Television Receivers			473.8	656.1	38.5	42.2
Converters, Preamplifiers, Amplifiers and Couplings for Cable Television			185.5	247.4	33.4	48.4
AM and AM/FM Radio Receivers (except for motor vehicles)	4,467,800 no	4,427,759 no	216.6	239.9	10.8	36.6
Radio-Tape Recorder Combinations	3,654,031 no	5,072,540 no	229.5	286.4	24.8	41.5
Radio-Tape Player Combinations	7,620,248 no	10,132,064 no	418.3	574.3	37.3	55.9
Radio-Phonograph-Tape Recorder Combinations	466,800 no	614,032 no	44.5	69.7	56.6	52.2
Audio Tape Players	5,528,437 no	5,541,892 no	123.6	124.2	0.5	67.7
Audio Tape Recorders and Dictation Machines and Parts	6,487,975 no	7,355,194 no	478.6	570.1	19.1	67.5
Tape Recorder and Tape Player Combinations (not incorporating radio or television receiver)			10.9	56.3	416.5	23.0
Record Players, Phonographs, Record Changers and Turntables and Parts	2,839,447 no	2,836,044 no	153.8	213.9	39.1	80.4
Electric Appliances and Parts			443.0	641.7	44.9	34.3
Refrigerators and Parts			26.3	53.5	103.4	23.8
Microwave Ovens	1,025,491 no	1,731,868 no	185.3	264.9	43.0	49.9
Electric Stoves and Ranges and Parts			125.4	195.1	55.6	90.1
Home Sewing Machines	183,999 no	253,961 no	20.8	31.1	49.5	19.2
Kerosene Heaters	1,920,191 no	837,560 no	105.6	39.6	-62.5	55.3
Lawn Mowers and Parts			23.3	33.6	44.2	43.3
Portable Typewriters	761,885 no	1,138,201 no	67.4	99.3	47.3	55.0
Earthen and China Tableware and Household Articles			323.5	367.9	13.7	40.0
Nonbone China Tableware	153,987,792 pc	173,427,516 pc	127.7	149.3	16.9	41.1
Earthen Tableware	255,261,168 pc	268,660,860 pc	143.1	156.7	9.5	56.4
Table Flatware and Kitchen Knives			94.0	115.5	22.9	44.1
Metal Housewares			51.6	52.5	1.7	10.5
Pipe Wrenches and Spanners and Parts			25.8	26.3	1.9	19.0
Variable Focus Still Cameras	4,202,325 no	5,219,265 no	422.2	528.4	25.2	86.6
Mounted Photographic Lenses	5,270,432 no	7,947,964 no	153.8	174.6	13.5	76.8
Flash Apparatus			50.2	52.3	4.2	64.8
Still Photographic Color Film (35 mm)	21,665,431 no	33,559,006 no	26.5	43.9	65.7	65.2
Optical Elements			58.3	92.6	58.8	35.5
Glasses and Frames			51.5	58.7	14.0	12.6
Clocks and Watches and Parts			335.3	435.6	29.9	34.5
Solid State Electronic Watches	6,188,931 no	6,570,353 no	51.2	53.3	4.1	25.5
Other Watches Without a Balance Wheel and Hairspring	6,171,875 no	9,660,652 no	171.1	249.6	45.9	48.7
Electric Clocks (incl. battery operated)	2,885,289 no	3,470,598 no	26.8	31.2	16.4	46.3
Toys and Sporting Goods			274.8	412.2	50.0	12.6
Video Games and Parts			86.5	95.0	9.8	45.4
Firearms and Parts			34.5	46.2	33.9	30.3
Fishing Equipment			53.0	67.6	27.5	34.2
Toys			35.7	112.1	214.0	9.4

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Imports 1984
Musical Instruments and Parts			$145.2	$196.6	35.4%	49.5%
Pianos and Parts	22,500 no	31,186 no	37.3	49.2	31.9	53.6
Electronic Musical Instruments			64.5	91.5	41.9	81.2
Motorcycles and Parts (excl. engines)			741.0	661.5	-10.7	90.6
Motorcycles	511,519 no	411,997 no	625.2	447.2	-28.5	90.3
Motorcycles With Piston Displacement Over 290 cc	288,317 no	187,826 no	495.3	322.4	-34.9	91.6
Parts (excl. engines)			115.9	214.3	84.9	91.2
Adult Bicycles and Parts			131.8	140.2	6.4	40.4
Bicycles	475,263 no	539,494 no	53.6	67.0	25.0	31.9
Parts			78.2	73.2	-6.4	53.5
Outboard Motors	79,040 no	100,692 no	41.3	71.4	72.9	70.4
Clothing and Accessories			339.7	494.0	45.4	3.7
Women's and Girls' Cotton Jackets	2,647,800 no	2,638,776 no	34.8	35.2	1.1	16.0
Women's Cotton Slacks	8,177,088 no	10,103,280 no	53.8	69.5	29.2	11.9
Women's and Girls' Cotton and Manmade-Fiber Knit Shirts	9,640,464 no	10,044,264 no	30.0	30.5	1.7	5.0
Men's and Boys' Cotton Knit Shirts	5,501,088 no	7,372,776 no	24.0	35.8	49.2	8.7
Footwear			22.1	26.4	19.5	0.5
Furniture			33.8	44.6	32.0	2.2
Pearls (not set or strung)			150.1	215.2	43.4	88.4
Jewelry			39.7	60.0	51.1	3.8
Works of Art			32.4	45.4	40.1	5.0
Printed Material			98.5	133.5	35.5	13.6
Pens and Pencils			74.1	96.8	30.6	60.5
Pharmaceuticals			138.5	138.4	-0.1	9.0
Bulk Vitamins			67.5	43.1	-36.1	30.6
Benzenoid Drugs			54.6	59.0	8.1	9.7
Intermediate Goods			5,391.3	7,275.6	35.0	5.9
Steel Mill Products	4,236,915 stn	6,630,005 stn	2,117.4	3,149.9	48.8	30.9
Wire Rods and Bars	864,535 stn	1,319,378 stn	337.8	495.1	46.6	26.5
Unalloyed Wire Rods	189,625 stn	282,183 stn	69.0	107.3	55.5	25.1
Semifinished Angles, Shapes and Sections Over 3"	457,211 stn	711,502 stn	142.2	215.7	51.7	35.6
Plates and Sheets	2,364,270 stn	3,315,994 stn	1,012.8	1,597.8	57.8	35.0
Tin Plate and Tin-Coated Sheets	164,310 stn	211,071 stn	96.6	120.7	24.9	60.8
Coated Plates and Sheets	1,081,226 stn	1,683,098 stn	492.0	817.9	66.2	57.8
Unalloyed Non-Pickled Plates and Pickled Sheets	223,869 stn	285,145 stn	64.1	95.2	48.5	12.8
Unalloyed Hot-Rolled Sheets	145,777 stn	190,816 stn	44.9	62.5	39.2	12.9
Unalloyed Cold-Rolled Sheets	558,960 stn	830,497 stn	203.4	329.5	62.0	26.5
Strip	40,331 stn	65,720 stn	39.9	71.0	77.9	31.3
Rails	87,213 stn	193,868 stn	34.0	69.2	103.5	61.1
Wire	131,255 stn	184,694 stn	83.8	121.4	44.9	28.2
Unalloyed and Uncoated Wire	105,111 stn	137,235 stn	55.8	76.4	36.9	39.9
Tubes, Pipes and Fittings	745,045 stn	1,405,798 stn	420.8	788.4	87.4	29.9
Cast Fittings, Forged Steel Flanges and Butt-Weld Fittings	22,755 stn	37,238 stn	31.3	52.4	67.4	41.1
Unalloyed Welded or Seamless API Line Pipe	105,234 stn	238,058 stn	38.6	91.2	136.3	30.9
Unalloyed Welded or Seamless Pipes and Tubes, Not Threaded	158,471 stn	269,188 stn	55.7	101.7	82.6	22.5
Unalloyed Welded or Seamless Pipes and Tubes, Threaded	102,607 stn	258,045 stn	63.3	157.3	148.5	57.6

Commodity	Quantity 1983	Quantity 1984	Value 1983	Value 1984	Percent Change 1983/84	Japan's Share of U.S. Imports 1984
Unalloyed Pipes and Tubes of Circular Cross Section	100,632 stn	173,439 stn	$ 48.0	$ 90.4	88.3%	36.8%
Alloyed Pipes and Tubes	32,991 stn	50,899 stn	52.2	60.8	16.5	32.4
Nonferrous Metals			393.3	506.4	28.8	6.2
Copper and Copper Alloys			107.1	114.0	6.4	7.5
Pipes and Tubes			50.7	58.3	15.0	36.8
Aluminum and Aluminum Alloys			222.7	331.1	48.7	13.5
Wrought Aluminum Sheets and Strip, Not Clad	113,223 stn	142,521 stn	211.1	302.9	43.5	39.0
Titanium	2,698 stn	5,256 stn	20.7	34.6	67.1	71.0
Refined Gold Bullion	73,841 toz	0 toz	32.5	0.0	-100.0	0.0
Steel Pillars, Girders and Similar Structural Units			23.9	36.9	54.4	29.2
Wire Products (excl. insulated electric wire)			95.2	122.6	28.8	24.8
Steel Wire Strand, Unfitted and Uncovered	47,847 stn	44,404 stn	40.4	45.8	13.4	32.6
Nails and Industrial Fasteners			293.4	438.2	49.4	38.9
Steel Bolts and Bolts With Nuts	46,833 stn	62,571 stn	35.9	55.4	54.3	42.1
Steel Nuts	47,188 stn	61,801 stn	62.2	90.9	46.1	51.3
Steel Screws	132,440 stn	181,519 stn	134.7	209.1	55.2	60.9
Steel Chains and Parts			51.2	61.9	20.9	49.2
Industrial Chemicals (excl. fertilizers and pharmaceuticals)			849.4	1,047.2	23.3	16.7
Organic Chemicals Found Naturally in Coal Tars			17.8	26.0	46.1	5.3
Other Cyclic Organic Chemical Products			135.0	151.3	12.1	20.4
Flavors and Other Aromatic Compounds			32.5	40.3	24.0	42.6
Organic Acids, Acid Anhydrides and Salts			27.8	34.9	25.3	14.0
Amino Acids and Other Nitrogenous Compounds			101.5	127.1	25.2	18.8
Synthetic Organic Dyestuffs			83.1	103.1	24.1	30.8
Plastic Materials and Resins			243.6	321.4	31.9	21.7
Polystyrene Resins and Styrene Copolymers and Terpolymers			47.7	52.2	9.4	44.7
Flexible Film, Strips and Sheets of Plastic Materials			97.8	125.0	27.8	23.7
Synthetic Rubber			22.9	28.3	23.6	9.5
Rubber or Plastic Hose, Pipe and Tubing			16.0	26.5	65.6	16.5
Rubber or Plastic Gaskets			16.6	28.3	70.5	20.9
Tires and Tubes			409.1	516.3	26.2	28.1
Car Tires	4,482,110 no	6,433,383 no	127.1	171.5	34.9	20.6
Truck and Bus Tires	1,777,781 no	2,091,858 no	215.9	254.5	17.9	37.0
Plywood and Veneers	122,683 msf	119,315 msf	42.5	42.8	0.7	6.9
Paper and Paper Products			63.7	79.2	24.3	1.5
Yarns, Fabrics and Made-Up Textile Articles			581.7	671.0	15.4	14.8
Manmade-Fiber Yarn	12,014 stn	13,814 stn	48.0	56.1	16.9	17.7
Cotton Fabrics	50,007,199 syd	79,031,384 syd	65.7	111.0	68.9	12.6
Manmade-Fiber Fabrics	274,780,650 syd	229,130,365 syd	278.6	260.4	-6.5	37.1
Bleached or Colored Fabrics of Continuous Polyester Fibers	197,166,684 syd	156,103,547 syd	199.1	173.8	-12.7	58.4
Wool Fabrics	4,490,131 syd	6,804,987 syd	18.9	30.4	60.8	16.5
Wadding, Batting and Nonwoven Fabrics	939 stn	1,463 stn	38.4	44.7	16.4	55.2
Ceramic Tile	51,545,517 sft	67,595,951 sft	39.9	56.4	41.4	22.6
Electrodes for Electric Furnaces or Electrolytic Use	23,113 stn	37,724 stn	43.7	64.1	46.7	64.9
Coke for Use as Fuel	0 stn	354,308 stn	0.0	29.7	100.0	63.0
Photographic Film and Paper (excl. film packaged for retail sale)			262.5	293.1	11.7	41.0
Medical X-Ray Film	100,746,787 sft	110,129,217 sft	70.7	67.8	-4.1	44.2
Silver Halide Color Photographic Paper	479,713,395 sft	443,728,422 sft	109.1	103.8	-4.9	52.6

Commodity	Quantity		Value		Percent Change	Japan's Share of U.S. Imports
	1983	1984	1983	1984	1983/84	1984
Food and Feed			$365.2	$443.9	21.6%	2.1%
Fish and Fish Products			218.5	244.6	11.9	6.7
Fresh, Chilled or Frozen Tuna	53,146 stn	58,937 stn	52.3	70.0	33.8	32.4
Scallops	3,713 stn	3,600 stn	33.1	31.9	-3.6	27.1
Alcoholic Beverages			19.9	25.6	28.6	0.9
Miscellaneous Imports			315.2	383.4	21.6	5.0

Key to quantity abbreviations:

msf = thousand square feet
no = number
pc = pieces
sft = square feet
stn = short tons
syd = square yards
toz = troy ounces

*Imports are valued on a Customs value basis.

Source: U.S. Department of Commerce, U.S. General Imports: Schedule A Commodity by Country (FT 135), December 1983 and December 1984

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JAPAN · ECONOMIC · INSTITUTE

JEI

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Kato, Weinberger Review Technology Transfers

Koichi Kato, director general of the Japan Defense Agency (JDA), and Defense Secretary Caspar Weinberger met in Washington last week to review mutual security efforts and discuss acceleration of Japan's self-defense programs. The meeting came as JDA completed work on the five-year defense program for fiscal 1986-90, expected to be submitted for cabinet approval by mid-July.

Mr. Kato was confident that the country would fulfill its goal of defending the sealanes approaching Japan to a distance of 1,000 nautical miles and said that the new five-year plan reflected that objective. He urged Mr. Weinberger to brief Japanese officials on certain advanced systems, including ultra-long-range over-the-horizon radar, the Aegis missile system and E2C early

Japan's ODA Disbursements Reach Record Levels

Preliminary data released by the Foreign Ministry indicate that Japan's official development assistance (ODA) in 1984 reached a record level of $4.3 billion, an increase of almost 15 percent over the previous year. This makes Japan the second-largest ODA donor after the United States among Organization for Economic Cooperation and Development (OECD) member states. The share of Japan's gross national product devoted to ODA now stands at 0.35 percent, up from 0.32 percent in 1983. There are indications, however, that the target figures set by the government for ODA increases for 1981-85 will be almost impossible to reach (see table).

Japan's Net ODA Disbursements in 1984*

(in millions of dollars)

	1981	1982	1983	1984	Percent Increase 1983-84
Bilateral ODA	$2,260	$2,367	$2,425	$2,427	0.1%
Grants	810	805	993	1,064	7.2
Capital Assistance	432	412	535	543	1.5
Technical Assistance	378	393	458	521	13.8
Development Lending and Capital	1,450	1,562	1,432	1,363	-4.8
Multilateral ODA	911	656	1,336	1,891	41.5
Grants	n.a.	260	306	257	-16.0
Capital Subscription and Payments	n.a.	401	1,035	1,638	58.3
Concessional Lending	n.a.	-5	-4	-4	**
Total	3,171	3,023	3,761	4,319	14.8
Percentage of GNP	0.28%	0.29%	0.33%	0.35%	

*Preliminary data.
**Not calculable.

Source: Ministry of Foreign Affairs

Tokyo's large increase in multilateral assistance continued for a second year, boosted primarily by a 58.3 percent rise in capital subscriptions and contributions to international organizations. Bilateral ODA outlays, on the other hand, remained almost identical to 1983 levels; increases in bilateral grants and technical assistance were offset by a steady drop in development lending and capital. The delayed recovery of developing countries from the recession and high U.S. interest rates seem to be at least partially responsible for the drop in lending.

Japan will probably be unable to reach its goal to double 1981-85's ODA over previous ODA spending levels. To reach the five-year target figure of $21.36 billion by the end of fiscal year 1985 (March 31, 1986) would require an estimated $7.09 billion in assistance this fiscal year, an increase of 64 percent over 1984 expenditures. The FY 1985 budget, however, shows an increase of only 10 percent in ODA (see JEI Report No. 11B, March 22, 1985). If expenditures are calculated in yen terms, Japan's projected ODA spending for 1981-85 will be almost double the amount spent in the previous five-year period, but in dollar calculations, total outlays will represent only about 78 percent of the doubling target.

The ODA program for 1981-85 also commits Tokyo to match the average percentage of gross national product spent on aid by the 17 member nations of the Development Assistance Committee of the OECD. Japan's 0.35 percent-of-GNP ratio marks a steady move toward the 0.37 percent OECD average.

Development assistance and defense were among the only sectors to escape funding cuts during this year's budget battles -- a reflection of the high priority the Nakasone administration places upon approaching the goals of the 1981-85 ODA program. The Foreign Ministry has indicated that a new long-term ODA program, now in the planning stage, will stress qualitative improvements in development assistance disbursements.

Sheri Hoptman

June Financial Affairs

The Ministry of Finance (MOF) continues to make strides toward integrating Japan into international financial markets by implementing a second round of structural changes. Although they face new competitive pressures, Japanese financial institutions are so enthusiastic about the changes that they continue to clamor for faster deregulation. MOF, however, remains committed to the step-by-step approach adopted in last year's yen-dollar agreement. Meanwhile, the yen has failed to appreciate against the dollar, irking American officials. The changes do offer foreign financial firms more access to Japan's financial world, a small consolation to the Reagan administration.

The yen continues to be buffeted by conflicting forces: a mounting trade surplus ($4.1 billion in April, with analysts predicting a 1985 trade surplus on a balance of payments basis in the neighborhood of $50 billion); an equally large net long-term capital outflow ($5.6 billion in April); a narrowing real interest rate gap between Japan and foreign markets; and weakness in both the U.S. and Japanese economies in recent months. On balance, the yen has been rising slowly against the greenback. May's Y251.44=$1.00 average was slightly better than April's Y251.69=$1.00 average rate (based on the median daily rate on the Tokyo interbank spot market). The yen continued to gain ground in the first half of June, averaging Y249.53=$1.00. Most analysts attribute this strength to slower U.S. growth and the Federal Reserve Board's discount rate cut. Japanese investors, however, continue to pour money into U.S. treasury bonds. While this demand for dollars will tend to keep the yen depressed, MOF's regulatory changes should lead to a counterbalancing increase in demand for the yen.

conclusion that the Japanese bill satisfies both tests at its present stage," the panel found; "however, we also recognize that the Japanese bill is not as specific as the U.S. legislation and that implementing regulations will be important in determining how the law will work in Japan." The one-year term will allow sufficient time for the Ministry of International Trade and Industry to draft and apply pertinent regulations, as well as provide for a review of Japan's legislation as urged by the Semiconductor Industry Association. Furthermore, because Tokyo has been making good faith efforts since the enactment of the SCPA, the effective date of the order was made retroactive to November 8, 1984. If Tokyo's legislation and implementation prove satisfactory, the president can issue a permanent proclamation granting reciprocal rights. If problems crop up, Tokyo has until November 8, 1987 to come up with an acceptable system.

The Patent Office has initiated two other inquiries into interim protection at the request of the Australian and British governments. These two countries merit careful attention because they have adopted existing copyright laws as the appropriate domain for IC mask works, an approach at odds with the U.S. law, which establishes a *sui generis* domain. Nevertheless, Mr. Quigg is considering granting temporary protection in view of the fact that both countries offer foreign applicants equal treatment and protection similar to the SCPA. In the meantime, Mr. Quigg's order will allow Japanese companies to at least enter applications for IC designs developed after July 1, 1983, although it is unclear if the Copyright Office can act on them before the July 1, 1985 deadline. In any case, Japanese mask works that are successfully registered during the one-year interim period will be valid regardless of the administration's final decision on Japan's protection system.

Jon Choy

U.S. Semiconductor Makers File Trade Complaint Against Japanese Rivals

Hard times are again rocking the cyclical U.S. semiconductor industry. Orders have been on the skids since late last summer when computer makers began cutting back new bookings and canceling existing ones. With no signs of a turnaround in sight, analysts have repeatedly trimmed projections of 1985 shipments, now certain to fall far short of last year's record. Semiconductor houses have laid off thousands of workers, instituted shorter work weeks for remaining employees, mothballed wafer fabrication facilities, and halted new building programs in an effort to contain the damage to their bottom lines, which are being pinched by rampant price cutting in memory chips and weakening prices for other devices as well as by the order slide.

The slump gripping U.S. semiconductor manufacturers has given new life to the industry's dormant campaign for legal action against Japanese semiconductor suppliers. During the last semiconductor business bust, Motorola Inc. and some other leading merchant makers lobbied hard for an industry-backed antidumping complaint charging Japanese exporters with "buy-in" pricing in the American market for 64K random access memories (RAMs) (see JEI Report No. 30A, August 12, 1983). This bid, rejected in March 1982 by the Semiconductor Industry Association's (SIA) deeply divided board of directors, was quietly shelved when the American memory market took off in the spring of 1982. It was replaced by a new campaign, also spearheaded by Motorola, to counter the alleged effects of Japanese government-industry targeting of the semiconductor business. This effort to win industry support for an unfair trade practices complaint under Section 301 of the 1974 Trade Act fizzled out in 1983 after SIA's board of directors split over the wisdom of going this route in February and then in July postponed consideration of legal action, citing the "favorable results" U.S. trade negotiators had achieved in bilateral discussions to improve American access to Japan's semiconductor market.

Interest in an unfair trade practices complaint against Japan revived this year along with the deepening industry slump. A number of SIA member companies, however, still had reservations about filing a 301 petition. Moreover, semiconductor executives remained split on what action the Reagan administration should take if Japan did not eliminate its alleged unfair business practices. Industry sources report that merchant manufacturers generally pressed for quotas on U.S. imports of Japanese-made integrated circuits -- a position vigorously opposed by International Business Machines Corp. and other computer makers that belong to SIA. At a meeting earlier this month, the association's board voted -- after a debate described as heated -- to file a 301 complaint but to drop quotas as a recommended option.

The unfair trade practices complaint SIA filed with the office of the United States Trade Representative June 15 seeks White House intervention on two fronts: to stop allegedly predatory pricing by Japanese semiconductor makers in the United States and to help American semiconductor manufacturers crack the Japanese market, where, it is claimed, U.S. sales have never exceeded 10 or 11 percent of consumption for any sustained period because of an evolving set of barriers. SIA claims that the major obstacle today to American suppliers attaining a position in Japan more in line with their international standing is the structure of the market itself. The biggest Japanese customers for semiconductors are also the leading producers of these devices, the trade association notes, adding that these vertically integrated firms have a collective interest in buying Japanese.

The SIA petition, which the Trade Representative's office must accept or reject within 45 days, outlines three ways in which the president might exercise the broad authority Section 301 gives him to counter allegedly unjustifiable or discriminatory trade practices of other countries at home, in the United States or in third markets. Unless their access to the Japanese market improves quickly, U.S. semiconductor makers suggest that the Reagan administration start an unfair trade practices proceeding under the General Agreement on Tariffs and Trade (GATT). To stop what they claim are the illegal pricing policies of their Japanese competitors in the U.S. market, American makers propose two options for presidential consideration: a Justice Department investigation into whether Japanese suppliers have violated antitrust law by engaging in predatory pricing and a Commerce Department cost-price model of Japanese semiconductors that would trigger antidumping investigations if there were indications of U.S. sales of Japanese-made chips at less than fair value.

The semiconductor industry's decision to go the trade-complaint route after rejecting this course of action three times in recent years raises an intriguing question: how did supporters of legal proceedings against Japanese makers finally win the backing of reluctant SIA member companies for an industry-initiated complaint? Current market conditions certainly provided powerful ammunition, but this is obviously not the first time American manufacturers of semiconductors for the merchant market have been caught in a slump that shows no signs of ending quickly. What apparently made the difference this time were the ambitious capital spending plans of Japanese semiconductor producers in a market already plagued with overcapacity.

Semiconductor makers in both the United States and Japan went on an investment spree during the 1983-84 boom. This new capacity started to come onstream just as demand began to weaken, putting enormous pressures on prices. With orders continuing to slump in this country, American companies have cut their 1985 plant and equipment budgets. So have Japanese suppliers -- but by a much smaller margin (see accompanying table). For U.S. semiconductor producers and customers, this situation raises the specter of a crippling chain reaction. Japanese makers anxious to sell the output of their new factories will have little choice but to dump commodity products like RAMs on the U.S. market. American companies will be forced to the sidelines, first in RAMs and then in other product lines as the profits needed to finance ever-increasing research and development costs and capital spending requirements dry up. Increasingly, this scenario goes, U.S. computer manufacturers and other big semiconductor users will become dependent on Japanese companies that are also their competitors in end-product markets for outside supplies of chips.

Capital Spending by Japan's Major Semiconductor Makers

(in billions of yen)

	FY 1981	FY 1982	FY 1983	FY 1984	Planned FY 1985
NEC Corp.	Y41.0	Y48.0	Y67.0	Y140.0	Y140.0
Hitachi, Ltd.	28.0	41.9	70.0	130.0	130.0
Toshiba Corp.	20.0	32.0	97.0	148.0	120.0
Fujitsu, Ltd.	33.0	43.3	59.0	125.0	100.0
Matsushita Electronics Corp.	22.0	10.0	23.0	110.0	100.0
Mitsubishi Electric Corp.	13.0	23.0	35.5	70.0	70.0
Sharp Corp.	10.0	11.8	20.0	35.0	40.0
Tokyo Sanyo Electric Co., Ltd.	12.3	9.0	12.0	31.5	46.0
Oki Electric Industry Co., Ltd.	12.5	14.0	14.4	36.4	32.0
Total	191.8	233.0	397.9	825.9	778.0

Source: Nihon Keizai Shimbun surveys

Susan MacKnight

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The views expressed in this report are those of the authors and do not necessarily reflect those of the Japan Economic Institute.

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Tokyo Announces Sweeping Tariff Changes

Against the backdrop of another outbreak of congresssional impatience with Tokyo's trade policies, the Japanese government June 25 filled in the details of the tariff changes it had promised in its April 9 package of market access initiatives (see JEI Report No. 14B, April 12, 1985). Included on the list of agricultural and industrial products slated for tariff cuts of at least 20 percent or duty-free treatment are roughly 1,800 of the 2,400-plus four-digit items in Japan's tariff schedule. While this coverage makes the pending round of unilateral tariff reductions the most sweeping in 14 years, it is no secret that the Foreign Ministry lobbied hard for a 25 percent across-the-board cut as tangible proof of the government's willingness to improve market opportunities in Japan for the exporters of other countries. This proposal ran

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over three years. The Japanese also outlined plans to reduce the minimum size of the popular money market certificates and allow a wider range of maturities on certificates of deposit. The initial reaction by David Mulford, Assistant Treasury Secretary for International Affairs and leader of the U.S. group, was muted. Although the length of the timetable may be objectionable, Mr. Mulford reserved comment until the United States has time to study it. Nonetheless, he praised the Japanese for the steps already carried out. The two sides will meet again, most likely in the fall.

Jon Choy

Japan's Economic Growth Pauses In First Quarter

Highlighting the links between the free world's two largest economies, Japan's economic growth came to a near standstill during the first quarter of 1985, paralleling the U.S. economy's pause. The bad news included sharp declines in the growth of both business investment and exports (see table for details). Policymakers found a silver lining in the spurt of consumer spending and the continued growth of the housing component. With export indicators showing renewed activity, observers forecast that the economy will return to a level of moderate growth in coming quarters.

The drop in Japan's gross national product (GNP) growth in the first quarter was much steeper than the U.S. decline. The U.S. economy's inflation-adjusted growth rate shrank from 4.3 percent in the fourth quarter of 1984 to 0.3 percent in the next three-month period. In comparison, overall Japanese growth in real terms gained just 0.4 percent over the first three months of 1985 versus 9.9 percent for the previous quarter. In both cases, however, the weak first-quarter figures obscured some encouraging trends.

The brightest spot in the maze of Japanese statistics is the pickup in consumer spending. Policymakers have been concerned about this sector since it accounts for over half of GNP. Japanese consumers have remained tight-fisted even though the economy has been booming since the middle of 1983. This caution increased the economy's dependence on foreign demand, heightening trade frictions with the country's trading partners. For nearly a year, the government has been attempting to generate a more balanced recovery -- one in which businesses directed toward domestic demand prosper as much as export-oriented firms. The income-tax cut phased in during fiscal 1983 and 1984 proved to have a very limited effect on consumption as the growth of personal spending fell to 2.6 percent in the year through March 1985 from 3.1 percent the previous year. Fatter spring wage increases and summer bonuses, arising from record corporate profits, may have broken the psychological dam (see JEI Report No. 22B, June 14, 1985). The real test will be if sales of automobiles and other consumer durables make solid gains this summer and fall.

Continued growth in residential construction is also encouraging. After performing erratically since fiscal 1982, homebuilding has gained strength for three straight quarters, bringing its overall performance for fiscal 1984 to 2 percent, a sharp contrast with fiscal 1983's 8.7 percent contraction and the first positive contribution since fiscal 1978. Continued ceilings on government-subsidized home loans and recent increases in interest rates, however, have cast some clouds over the bright housing picture.

Japan's Real Gross National Product at Constant (1975) Prices

(in billions of yen, seasonally adjusted, quarterly totals and rates of growth at annual rates)

	FY 1983	FY 1984	April-June 1984	July-September 1984	October-December 1984	January-March 1985
Gross National Product	Y213,584.3 (3.9%)	Y225,795.8 (5.7%)	Y221,934.9 (7.6%)	Y223,366.6 (2.6%)	Y228,719.4 (9.9%)	Y228,947.0 (0.4%)
Personal Consumption Spending	111,516.1 (3.1%)	114,410.0 (2.6%)	113,323.8 (1.5%)	114,054.3 (2.6%)	114,550.5 (1.8%)	115,560.1 (3.6%)
Private Residential Construction	9,865.8 (-8.7%)	10,062.0 (2.0%)	9,826.1 (-5.4%)	9,965.3 (5.8%)	10,198.7 (9.7%)	10,314.2 (4.6%)
Private Fixed Nonresidential Investment	37,230.3 (5.4%)	41,308.9 (11.0%)	39,678.7 (10.3%)	40,658.3 (10.2%)	42,311.4 (17.3%)	42,353.4 (0.4%)
Change in Business Inventories	977.6 (-26.5%)	1,404.5 (43.7%)	1,155.2 (267.0%)	1,485.9 (173.7%)	1,297.2 (-72.2%)	1,687.2 (186.2%)
Government Current Expenditures	19,872.1 (3.3%)	20,321.2 (2.3%)	20,152.2 (3.3%)	20,270.8 (2.4%)	20,321.6 (1.0%)	20,537.6 (4.3%)
Government Fixed Investment	18,216.7 (-1.4%)	17,989.3 (-1.2%)	18,368.9 (17.8%)	18,504.7 (3.0%)	17,935.6 (-12.9%)	17,284.0 (-15.3%)
Change in Government Inventories	-238.9 (*)	119.2 (*)	6.4 (*)	488.0 (*)	-47.5 (*)	13.9 (*)
Net External Sector	16,144.6 (28.9%)	20,180.7 (25.0%)	19,423.6 (36.5%)	17,939.3 (-37.4%)	22,151.9 (132.5%)	21,196.6 (-18.4%)
Exports of Goods and Services and Factor Income Received	44,059.6 (9.2%)	51,214.1 (16.2%)	49,462.1 (20.5%)	50,166.9 (5.8%)	53,083.2 (25.4%)	52,171.4 (-7.0%)
Imports of Goods and Services and Factor Income Paid	27,915.0 (0.3%)	31,033.4 (11.2%)	30,038.5 (11.4%)	32,227.6 (32.5%)	30,931.3 (-17.1%)	30,974.8 (0.6%)

*Cannot be calculated or meaningless.

Source: Economic Planning Agency

Two components that powered the economic recovery in 1984 suddenly lost steam in the first quarter of 1985. The growth of private fixed nonresidential investment plummeted from 17.3 percent in last year's final quarter to just 0.4 percent, the smallest quarterly gain in several years. Given the fact that this sector racked up double-digit gains for the previous four quarters and has averaged above 7 percent since mid-1983, the decline is even more pronounced. Nevertheless, private-sector outlays for plant and equipment climbed 11 percent in fiscal 1984, twice the level of the previous year.

Part of the cutback in capital spending can be attributed to the sharp rise in business inventories, which generally indicates that capacity is sufficient to satisfy demand. Although this item is extremely volatile, it reached its highest level since 1982's third quarter during the first three months of 1985 -- an indication that the business cycle may be nearing its peak.

A more important factor in the investment cutback was the decline in foreign demand. Exporters experienced a sharp drop in shipments during 1985's first quarter, leading to a 7 percent decline in exports of goods and services on a national income accounts basis. Combined with stagnant imports, the net external sector contracted at an annual rate of 18.4 percent in the first quarter of 1985, again in sharp contrast to the upswing recorded in past quarters. Most analysts agree, however, that the outlook for exports is bright. Significantly higher limits on cars exported to the United States coupled with recovering European and third-world economies should provide a major boost to the external sector.

The public sector remains an ambivalent source of growth. The fiscal 1984 supplementary budget accelerated current expenditures in the last quarter of the fiscal year by pumping new funds into disaster relief activities. Government fixed investment, however, fell for the second consecutive quarter and is likely to remain on a downward spiral. Tight fiscal policies continue to hold sway with the government, a direction unlikely to change under Prime Minister Yasuhiro Nakasone.

As a result, the Japanese economy presents a mixed picture for fiscal 1984 and especially for the first three months of 1985. One point stands out, however: the continued dependence of the economy on foreign demand. Unless policymakers are successful in their search for non-fiscal sources of stimulus for the domestic economy, export dependence and trade frictions may persist.

Jon Choy

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The views expressed in this report are those of the authors and do not necessarily reflect those of the Japan Economic Institute.

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REPORT

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Congress Tackles Trade Reform

In close consultation with the Labor-Industry Coalition for International Trade (LICIT), a group of Senate and House members have developed legislation concerning international trade policy and practice that would substantially alter existing laws. The Trade Law Modernization Act of 1985 (TLMA) was introduced in the House of Representatives April 3 by Reps. Frank Guarini (D, N.J.) and John J. Duncan (R, Tenn.) and on the Senate side in June by Sens. John Heinz (R, Pa.) and Max Baucus (D, Mont.). Initial hearings June 26 by the House Energy and Commerce Subcommittee on Commerce, Transportation and Tourism included statements from representatives of the semiconductor, opto-electronics and natural resource industries who support the bill. The complaints by these industries about unfair foreign competition from Japan, Canada, Mexico and other countries have grown louder and more frequent on Capitol Hill in recent months.

Howard D. Samuel of the AFL-CIO pointed out that the bill represents a "remarkable consensus" among smokestack and high technology industries, labor

STATISTICAL SUPPLEMENT

Trade and Payments Data

(in millions of dollars unless otherwise indicated)

	1983	1984	January-May 1984	January-May 1985	March 1985	April 1985	May 1985
Japan's Balance of Payments							
Trade Balance	$31,454	$44,257	$14,492	$17,381*	$4,180*	$4,136*	$4,288*
Exports (f.o.b.)	145,468	168,290	66,965	67,052*	14,388*	14,719*	14,234*
Imports (f.o.b.)	114,014	124,033	52,473	49,671*	10,208*	10,583*	9,946*
Current Account Balance	20,799	35,003	10,304	14,498*	3,455*	4,127*	3,577*
Long-Term Capital (net)	-17,700	-49,651	-13,904	-20,828*	-5,068*	-5,554*	-4,678*
Overall Balance	5,177	-15,200	-6,078	-2,524	-189	-1,122	1,012
International Reserves (end of period)	24,496	26,313	25,323	27,328	26,538	26,841	27,328
Japan's Customs Clearance Trade							
Trade Balance	20,534	33,611	9,493	12,635*	3,186	3,260	3,360*
Exports (f.o.b.)	146,928	170,114	67,744	67,790*	14,528	14,875	14,405*
Cars	19,535	21,899	9,115	9,360*	1,321	2,570	2,230*
Steel	12,843	13,852	5,350	5,596*	1,319	1,119	1,208*
Imports (c.i.f.)	126,393	136,503	58,252	55,155*	11,342	11,615	11,045*
Crude Oil	40,063	39,379	17,599	15,655*	3,583	3,067	2,866*
Japan-U.S. Trade							
Trade Balance	18,181	33,075	11,485	13,442*	2,346	3,460	3,408*
Exports (f.o.b.)	42,829	59,937	22,723	24,823*	4,688	5,785	5,690*
Imports (c.i.f.)	24,648	26,862	11,238	11,381*	2,342	2,325	2,282*
Yen-Dollar Exchange Rate							
Tokyo Spot Market (end of period)	Y232.20	Y251.10	---	---	Y252.50	Y252.25	Y251.85
U.S.-Japan Trade							
Trade Balance	-19,289	-33,560	-12,980	n.a.	-3,396	-4,198	n.a.
Exports (f.a.s.)	21,894	23,575	9,554	n.a.	2,328	1,733	n.a.
Industrial Supplies	8,734	9,139	3,642	n.a.	910	704	n.a.
Food and Feed	5,555	5,929	2,513	n.a.	376	370	n.a.
Capital Goods	5,116	5,627	2,324	n.a.	710	451	n.a.
Consumer Goods	1,394	1,476	580	n.a.	140	111	n.a.
Imports (Customs)	41,183	57,135	22,533	n.a.	5,724	5,931	n.a.
Automotive Products	14,919	18,477	7,486	n.a.	1,751	1,945	n.a.
Industrial Supplies	5,391	7,276	2,989	n.a.	642	611	n.a.
Consumer Goods	8,296	11,266	4,322	n.a.	1,246	1,291	n.a.
Capital Goods	11,896	19,290	7,400	n.a.	1,986	1,964	n.a.

*Preliminary

STATISTICAL SUPPLEMENT

Japanese Economic Indicators

(percentage change from year-earlier period unless otherwise indicated)

	1983	1984	January-April 1984	January-April 1985	February 1985	March 1985	April 1985
Discount Rate (end of period)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Outstanding Money Supply	7.4%	7.8%	7.9%	8.0%	7.9%	7.9%	8.4%
Industrial Production	3.6%	11.1%	11.1%	6.5%	5.9%	5.2%	7.1%
Manufacturing Operating Rate	1.6%	7.3%	8.8%	2.3%	1.1%	1.6%	3.4%
Number of Bankruptcies	11.9%	8.8%	18.5%	-9.2%	-13.4%	-12.8%	-8.4%
Residential Construction Starts	-0.8%	4.4%	2.6%	6.4%*	6.0%	8.1%	3.2%*
Job Openings to Applications (ratio)	0.60	0.65	0.64	0.68	0.68	0.68	0.68
Nominal Wages	3.5%	4.5%	4.4%	3.5%*	3.2%	2.4%	3.7%*
Labor Productivity	4.5%	9.9%	10.4%**	6.9%**	5.2%	n.a.	n.a.
Wholesale Prices	-2.2%	-0.3%	-1.2%	0.7%	0.8%	0.9%	0.6%
Consumer Prices	1.9%	2.2%	2.4%	2.0%	1.4%	1.6%	1.9%
Yen-Based Export Prices	-6.0%	0.6%	-1.3%	4.6%	4.2%	5.6%	4.3%
Yen-Based Import Prices	-7.8%	-3.4%	-6.4%	3.0%	2.9%	4.3%	3.3%

*Preliminary
**Through February of each year only.

For Japan's most recent GNP figures, see JEI Report No. 24B, June 28, 1985.

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Diet Concludes Session

The 102nd regular session of the Diet ended June 25, concluding a 150-day session in which legislators approved most of the major bills introduced by the cabinet, but failed to address several key issues that are fundamental pillars of the Nakasone government. Among the issues neglected were educational reform, reorganization of the Japanese National Railways (JNR) and redistribution of seats in the lower house of the Diet.

As usual, almost all of the bills formally introduced in this session were approved. Unlike Congress, where tens of thousands of bills and committed to a steady defense buildup compatible with its overall presence in the region.

Preliminary sparring over the FY 1986 defense budget followed notification by the Foreign Ministry to the Diet that for the first time the United States had formally requested a transfer of military technology from Japan under the terms of notes exchanged between the two countries in November 1983. The request is said to be related to "image homing" guidance technology for use in tactical missiles. "Image homing" systems enable missiles and "smart" bombs to neutralize decoys that are effective on heat-sensitive and other systems by enabling the missile to "memorize" the physical characteristics of a target. Under the terms of the 1983 agreement, the ad hoc committee on technology transfers, consisting of representatives from both the United States and Japan, must review the request before the transfer is approved.

Michael W. Chinworth

Surging Capital Outflow Puts Japan Near Top Creditor Position

Preliminary data from the Ministry of Finance (MOF) reveal that Japanese investors sent a tidal wave of money out of the country in 1984, much of it going to the United States and European countries. A net long-term capital outflow of $49.7 billion was recorded last year, pushing Japan's net overseas assets to $74.3 billion. In contrast, the United States saw its net foreign assets erased by March 1985, a decline of more than $100 billion in a little over a year. MOF points to the record increase in Japan's 1984 current account surplus ($35 billion) as the largest factor in the rapid accumulation of foreign assets.

Japan's net capital outflows to the United States and the European Community (EC) highlight the sharp change in its international financial position (see Table 1). The total net outflow of long-term capital jumped 2.8 times in 1984, with net flows to the United States rising 2.7 times and those to the EC 3.9 times. While overall portfolio investment more than tripled between 1983 and 1984, such investments in the EC were 38 times higher in 1984 and in the United States 2.7 times bigger. The leap in investment going into the EC reflects MOF's opening of the Euroyen market to Japanese companies and financial institutions.

It is interesting to note last year's pattern of investment in Europe versus that in the United States. The United States attracted the majority of Japan's direct investment and a little less than half of the portfolio investment. The EC, on the other hand, played a small role in Japan's direct investment but an increasingly important one in its portfolio investment.

Japan's external assets totaled $341.2 billion at the end of 1984 and liabilities rose to $266.9 billion (see Table 2), yielding a net $74.3 billion. This placed Japan ahead of the United States and West Germany but after Great Britain in terms of net external assets. The private sector was clearly the major actor in this drama, as private investors added $53.9 billion in foreign long-term assets while taking on just $7.2 billion in corresponding liabilities. Loans and portfolio investment accounted for nearly all of this increase, a situation with strong implications for the country's future balance of payments. Up until this spring, Japan ran a deficit in terms of international investment income. Heavy purchases of U.S. government securities, which show an immediate return, pushed the invisibles balance into the black for the first time in April 1985 -- a trend that is likely to persist and accelerate.

Table 1: Net Outflow of Japanese Long-Term Capital

(in billions of dollars)

	1983	1984
Portfolio Investment - Overall	$7.5	$23.6
To the United States	3.9	10.6
To the EC	0.2	7.6
Direct Investment - Overall	3.2	6.0
To the United States	1.0	3.2
To the EC	0.5	0.7
Loans - Overall	8.5	12.0
To the United States	0.3	0.5
To the EC	1.5	1.6
Long-Term Capital Balance - Overall	17.7	49.7
With the United States	5.5	14.8
With the EC	2.8	10.9

Source: Ministry of Finance

MOF officials predict that Japan will push its net assets above $100 billion by the end of 1985, making it the world's largest creditor nation. The implications of Japan's surplus, as well as the United States' deficit, are just beginning to be discussed.

Jon Choy

International Trade White Paper Released

The Ministry of International Trade and Industry (MITI) recently released its annual White Paper on International Trade. The 421-page report analyzes the state of the world economy in 1984 and Japan's trade and payments balances. Echoing many of the themes that Prime Minister Yasuhiro Nakasone has expressed in recent addresses, the paper urges an increase in imports (particularly of manufactured products), an expansion of domestic demand in order to reduce Japan's mounting trade surplus, and an early start for a new round of multilateral trade negotiations under the General Agreement on Tariffs and Trade (GATT). The report also proposes that Japan take a leading role in developing the base for a new international trading system.

Table 2: Japan's External Assets and Liabilities, 1983-84

(in millions of dollars)

Assets	1983	1984	Change
Long-Term Assets	$170,905	$229,184	$58,279
Private sector	138,051	191,946	53,895
Direct investment	32,178	37,921	5,743
Export credit	18,110	22,824	4,714
Loans	29,266	40,601	11,335
Portfolio investment	56,115	87,578	31,463
Other	2,382	3,022	640
Government sector	32,854	37,238	4,384
Export credit	1,165	1,189	24
Loans	22,473	24,491	2,018
Other	9,216	11,558	2,342
Short-Term Assets	101,051	112,024	10,973
Private sector	75,492	84,761	9,269
Financial accounts	72,087	77,562	5,475
Other	3,405	7,199	3,794
Government sector	25,559	27,263	1,704
Financial accounts	25,556	27,261	1,705
Other	3	2	(1)
Total Assets	271,956	341,208	69,252

Liabilities	1983	1984	Change
Long-Term Liabilities	$102,794	$113,222	$10,428
Private sector	76,551	83,738	7,187
Direct investment	4,364	4,458	94
Import credit	16	24	8
Loans	1,320	1,266	(54)
Portfolio investment	69,948	77,081	7,133
Other	903	909	6
Government sector	26,243	29,484	3,241
Loans	124	103	(21)
Portfolio investment	26,119	29,381	3,262
Other	0	0	0
Short-Term Liabilities	131,903	153,640	21,737
Private sector	125,064	145,900	20,836
Financial accounts	107,308	130,098	22,790
Other	17,756	15,082	(1,954)
Government sector	6,839	7,740	901
Financial accounts	3,765	3,590	(175)
Other	3,074	4,150	1,076
Total Liabilities	234,697	266,862	32,165

Source: Ministry of Finance

The white paper's examination of the world economic scene focuses on the rapid recovery of international trade and the rising volume of global exports. According to the report, the increase is mainly attributable to the U.S. economic recovery, the soaring dollar and the consequent large flow of imports into the United States and Canada. Japan's exports rose almost 16 percent to approximately $170 billion, $60 billion of which went to the United States in the form of cars, computer peripheral equipment, video cassette recorders and other manufactured goods.

On the other side of the trade ledger, Japan's aggregate imports increased by 10 percent. Imports of manufactured goods rose 18.2 percent in 1984 to more than $40 billion, thus accounting for almost 30 percent of total imports. Purchases of consumer goods, however, represented a disappointing 16 percent of total imports. The white paper acknowledges that Japanese corporations will have to increase efforts to purchase foreign manufactured goods in order to break this trend.

In the short term, the only means suggested for expanding domestic demand for imports are to bring down the value of the dollar and encourage foreign exporters to develop products to fit the Japanese market. The report also affirms that expanded foreign direct investment and technology transfer are the long-term solutions for relieving the tensions caused by Japan's large trade surpluses with most nations. These surpluses are attributed by the report to the strong U.S. dollar, the decline in the international market price of petroleum and other primary goods and the admittedly competitive and healthy Japanese private sector.

The white paper has been produced annually by MITI to update members of the Japanese cabinet and the public about the state of the international marketplace and Japan's position in it. As one newspaper editorialized, it is "disturbing reading for any person who is worried about the irritations of the nation's trading partners" since its recommendations offer no new solutions to the problems engendered by Japan's export-oriented trade structure. In fact, the conclusions of the document are almost identical to those presented in last year's volume.

Sheri Hoptman

Japan's Telecommunications Market Heats Up

The pace of agreements among Japanese and U.S. telecommunications firms has accelerated sharply since the April 1, 1985 liberalization of Japan's telecommunications market. A number of corporations have applied to the Ministry of Posts and Telecommunications (MPT) for operating licenses as common carriers (Type I companies) and providers of enhanced data transmission services (Type IIs). The newly privatized Nippon Telegraph and Telephone Corp. (NTT), previously the sole provider of primary voice communications, will face at least five competitors by 1988. Competition in the Type II market centers around value-added networks (VANs), with foreign and domestic companies offering a multitude of local and nationwide systems. Although the market will take several years to mature, the private sector's initial response to the reforms has been enthusiastic.

American Telephone & Telegraph Co. (AT&T) chairman Charles L. Brown flew to Japan last week to announce AT&T's pact with Japan ENS Corp. to offer a large-scale VAN to Japanese customers. The service will encompass the processing, storing and transmission of data on a global basis, not just nationwide. Japan ENS plans an intelligent network to link most types of computers and data protocols, drawing on AT&T's experience in the United States with its Net 1000 system. Japan ENS will contribute marketing and after-sales support efforts, key aspects of AT&T's penetration of the Japanese market. The joint venture will be a major force in the market, not only because of AT&T's size but because Japan ENS is composed of 16 major Japanese corporations, including the Bank of Japan, Ltd., Mitsui & Co., Ltd., Hitachi, Ltd. and Fujitsu, Ltd. AT&T will provide half of Japan ENS' Y10 billion ($400 million) capital by October, as well as have employees in managerial and technical positions. The agreement puts AT&T into direct competition with NTT, IBM Japan Ltd., NEC Corp. and other electronics giants in the large-scale VAN market.

The Ministry of Posts and Telecommunications in late June approved the applications of five Japanese firms to compete directly with NTT in the common carrier market (see table). The first three rivals plan to begin operations by late 1986 in the heavily populated Tokyo-Osaka corridor, and the remaining two will offer nationwide service by early 1988. Two of the new Type I firms are particularly interesting in light of their government connections: Japan Telecom Co., Ltd. is backed by the Japanese National Railways, while Teleway Japan Corp. is the brainchild of the Japan Highway Public Corp. and, indirectly, the Ministry of Transportation.

Equally interesting are the means of transmission selected by each new firm. Japan Telecom and Teleway Japan, drawing on the substantial real estate holdings of their backers, plan to lay fiber-optic networks. Daini-Denden Inc., lacking such support, chose the aerial route: a network of microwave towers. Although these three firms are potential customers for American telecommunications equipment makers, the remaining two firms are the most promising targets because of their choice of a satellite system as the means of transmission. Hughes Communications Inc. has a 30 percent stake in Japan Communications Satellite Co., Ltd., while Ford Aerospace and Communications Corp. has links with Space Communications Corp.

Even though Japan's international telecommunications market was not explicitly included in the reform legislation, MPT has said that it expects the spirit of free competition to extend to Kokusai Denshin Denwa Co., Ltd. (KDD), the quasi-government corporation that dominates Japan's international telecommunications links. Prior to liberalization, KDD agreed to lease its international circuits to General Electric Information Service Co., GTE Telenet Inc. and McDonnell Douglas Corp.'s Tymnet Inc. for their international VAN systems. KDD, AT&T and others are also planning a trans-Pacific fiber-optic cable with eight times the capacity of existing undersea links, scheduled for completion in 1987. Of greater significance is KDD's recent decision to tie up with MCI Communications Corp.'s U.S. telephone network to provide trans-Pacific voice communications services. Only AT&T has a similar agreement with KDD. Furthermore, the recent decision by International Business Machines Corp. (IBM) to sell MCI its stake in Satellite Business Systems, a private satellite communications company, in exchange for MCI stock means that the intense AT&T-IBM rivalry will be extended across the Pacific.

Japan's New Common Carriers

	Capital (Y billion)	Major Shareholders	Services	Service Areas	Start of Operations	Equipment	Number of Circuits
Daini-Denden Inc.	Y8.0	Kyocera Corp., 28% Ushio Inc., 2.5%	Telephones and leased circuits	Tokyo-Osaka	Leased circuits December 1986 Telephones October 1987	Microwave	5,760
Japan Telecom Co., Ltd.	8.4	JNR, 36% Nippon Express Co., Ltd., 1.2%	Telephones and leased circuits	Tokyo-Osaka; parallel to bullet trains	Leased circuits October 1986 Telephones October 1987	Fiber-optic	4,320
Teleway Japan Corp.	8.3	Toyota Motor Corp., 6%	Telephones and leased circuits	Tokyo-Osaka; parallel to major highways	Leased circuits November 1986 Telephones September 1987	Fiber-optic	5,760
Japan Communications Satellite Co., Ltd.	0.4	C. Itoh & Co., Ltd., 40% Mitsui & Co., Ltd., 30%	Leased circuits	Nationwide	February 1988	Satellite	
Space Communications Corp.	0.1	Mitsubishi Corp., 75% Mitsubishi Electric Corp., 25%	Leased circuits	Nationwide	April 1988	Satellite	

Even though Tokyo has liberalized Japan's telecommunications markets, the government will continue to be heavily involved in promoting the domestic industry. MPT and a local Kansai business group have announced plans to open a telecommunications research laboratory near Kyoto by March 1986. Possible projects include a laser-based satellite communications system, optical transmission and processing systems and a telephone with a built-in translator. Nevertheless, market opportunities in Japan have been greatly improved, and foreign and domestic companies are moving aggressively to exploit them.

Jon Choy

Export Administration Act Approved By Congress

After two years in limbo the Export Administration Act (EAA) will become law. Both the Senate and the House approved the bill by voice vote June 27 after a conference committee reached quick agreement on final details in a meeting two days earlier. The measure, which replaces the version of the EAA that expired in March 1984, outlines the administration of a number of export controls and procedures.

With strong support from the Reagan administration and the determination to avoid the controversies that prevented passage of the measure last year, bill managers had placed the current session's version of the EAA on a "fast track" for consideration. After prompt attention in committee review, Senate approval was gained April 3, followed by House passage of a slightly amended version April 16. When the necessity of a conference to reconcile the different versions of the bill became apparent in early May, some observers feared a repeat of the long -- and eventually inconclusive -- debate of last summer since most of the same participants from that round were again appointed to the conference committee (see JEI Report No. 44A, November 16, 1984). Instead, the negotiating process was left to key staff members, and action on EAA went underground for nearly two months.

The contentious issues mainly concerned the roles of the Defense Department, Justice Department, Commerce Department and U.S. Customs Service in enforcing the legislation. Provisions to substantially expand the powers of the Secretary of Defense to control exports for national security reasons were dropped. The Pentagon's control over high technology exports to Soviet bloc countries will remain basically unchanged from previous years -- a hard-won, if limited, concession to members of the business community who argued for less government interference in exports to communist countries.

The House and Senate versions had also differed on what roles the Commerce Department and the Customs Service would play in enforcing provisions of the EAA. The conference compromise was to let the two organizations share enforcement responsibility. A proposal by Rep. Peter Rodino (D, N.J.) giving the Justice Department authority to write regulations for Commerce and the Customs Service was modified during the conference session. Justice will be able only to offer guidelines for enforcement -- and that only to the Commerce Department.

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JAPAN-ASEAN TRADE RELATIONS

Summary

The economic relationship between Japan and the six nations that make up ASEAN is a substantial one with great potential for future growth. However, the member nations have expressed dissatisfaction with the pattern of trade represented by Japan's overwhelmingly industrial exports to them and ASEAN's largely raw material exports to Japan. The dilemma facing Japan's policymakers involves such political considerations as Japan's national prestige as much as it does economics. As the chorus of complaints from the region continues, Japan is forced to respond to ASEAN while juggling other trade demands from the United States and Europe.

Trade and Resources

A discussion about Japan's trade relationship with the countries of the Association of Southeast Asian Nations (ASEAN) is a study in contrasts. In comparison with Japan, the sheer size of ASEAN, which includes the nations of Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand, is striking when calculated by population and land area. Its population of 277 million is more than twice that of Japan and its land area is ten times as large. In economic terms, however, Japan outmuscles ASEAN. Japan's gross national product (GNP) is six times as large as that of all the ASEAN countries combined. Japan's degree of industrialization, the affluence of its population and the volume of international economic activity it generates are far greater than the economic development characterizing the Southeast Asian group of nations.

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Japan's trading relationship with ASEAN is of long standing, and benefits from proximity, well-established trade mechanisms and the singularly complementary nature of the economies of the two entities. Japan is an island nation that has few natural resources but is nevertheless a tireless exporter of almost every kind of manufactured good. The ASEAN nations are among Japan's chief suppliers for such vital materials as petroleum (Indonesia), copper (the Philippines), tin (Malaysia, Indonesia, Thailand) and nickel and bauxite (Indonesia).

ASEAN is blessed with generous supplies of natural resources, including petroleum and natural gas, and a strategic location that encompasses narrow straits crucial to trade between the Indian and Pacific Oceans. In addition, these nations have a politico-economic infrastructure inherited from colonial and historical experiences compatible with those of Japan, the United States and Europe. A period of relative political stability and export-oriented development strategies beginning in the 1960s bolstered the region's rate of economic growth. While slowing down during the world recession at the beginning of this decade, ASEAN nations, with the exception of the Philippines, have maintained a rate of growth twice that of industrialized countries -- making the region a dynamic, natural market for products from Japan and other developed countries.

Though it is difficult to discuss any six countries as a unit, the degree of consonance among these nations' economies, international outlooks and development goals is high. These similarities lent cohesion to the movement in 1976 to make what was then largely a paper organization a working regional entity. Still, ASEAN is not quite an alliance, and far from becoming a market integration scheme on the European Community (EC) pattern. It is an association of mutual interests, mainly of a political nature, and a mechanism by which all the member states can gain the ear of the larger powers.

It is also a lot more than political shorthand to Japan and the United States, particularly when they are trying to drum up support on international issues. In international forums ASEAN has played what Japanese and American diplomats consider a crucial role in bridging the gap between nonaligned states and Western powers. Japan considers ASEAN support for a new round of multilateral trade negotiations under the General Agreement on Tariffs and Trade (GATT) so important that it has centered a great deal of its diplomatic activity on that goal in recent months. Moreover, ASEAN leads and Japan and the United States follow as far as policy on Indochina is concerned. And ASEAN sensitivities are frequently invoked during discussions of topics ranging from Pacific Rim trade integration to U.S.-Japan security relations.

The region's concerns about Japan's extensive business presence have also attracted much attention in Tokyo. Anti-Japanese sentiment stemming from World War II has grown less intense with the years, but it is still invoked when Japan's economic clout or even the presence of Japanese in the region seem to be growing too rapidly. The high profile of the Japanese business community in Southeast Asia -- today estimated at some 40,000 members or more -- was at issue along with the proliferation of Japanese televisions and automobiles when Prime Minister Kakuei Tanaka made a tour of the five member nations in 1974.

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(Brunei became the sixth member of the association in January 1984.) In Thailand he was greeted with demonstrators flaunting signs against the "Ugly Japanese" and in Jakarta mobs rioted and set fire to Japanese firms. Mr. Tanaka was forced to cancel his trip and return to Tokyo.

A process of soul-searching in Japan culminated in Prime Minister Takeo Fukuda's 1977 policy of "heart-to-heart relations" with ASEAN. This policy was considerably sweetened by a pledge of $1 billion in aid for ASEAN industrial projects. The emotional overtones of such diplomacy and a low-key approach by Japanese businesses seemed to be working well in 1981 when Prime Minister Zenko Suzuki modified the wording of the "Fukuda Doctrine" by calling for the "politics of harmony" (wa no seiji) when he made a tour of the region.

Under Prime Minister Yasuhiro Nakasone's administration, the rhetoric of the Fukuda Doctrine and other obligatory diplomatic gestures have been maintained, but the escalation in working exchanges between ASEAN and Tokyo and the proliferation of official and semi-official organizations designed to encourage closer relations reveal even more the importance Tokyo places on good relations with ASEAN. Though some members of the Foreign Ministry may say privately that Japan's preoccupation with establishing good will in Southeast Asia is due purely to economic realities, the political and emotional overtones of Japan's relations with the region are ever present.

Prime Minister Nakasone has placed a great deal of his prestige and popularity as a leader on the altar of foreign policy. One clear example occurred after his election in 1983, when he toured the ASEAN nations to defuse domestic criticism about his policy on Japan's defense buildup. Cautious support from ASEAN helped lower the level of the controversy, temporarily at least. Relations with the region have continued to be an important tool for Mr. Nakasone's management of domestic politics. Public sentiment in Japan continues to play a role in the relations between the two regions. Japan reacts with great emotion to Malaysia's "Look East" policy and Singapore's efforts to "Learn from Japan." So, when Thai students organized a well-publicized boycott of Japanese goods recently, it was reported in Japan with particular dismay. The importance of "harmony" with ASEAN, and the disruptive effects of the trade issue, became clearer than ever.

The Unequal Relationship

The United States and Japan are the region's largest overall trade partners and investors. The six nations collectively purchase more from Japan than from any other country, and this relationship, with the exception of the Philippines, holds bilaterally as well. Japan takes about 30 percent of ASEAN's exports. As a source of Japan's imports, excluding crude petroleum, the region has accounted for between 10 and 12 percent of the total for the past two decades. Clearly each partner is important to the other, but these statistics, as well as the high substitutability of most ASEAN primary products, lead many to point out that ASEAN needs Japan more than Japan needs ASEAN. This aspect of the perception of dependence has added urgency to the ongoing trade debate.

The call is for a more "equal" and diversified trading relationship. As ASEAN leaders have pointed out, Japan's purchases from the region have declined since 1980. And although ASEAN registered a trade surplus with Japan of approximately $7.9 billion last year (see Table 1), when mineral fuel exports are excluded, a trade deficit of almost the same amount appears (see Table 2).

The nature of the controversy in regional terms is not whether the merchandise trade balance between Japan and ASEAN registers a surplus or a deficit, but the volume and composition of that trade. ASEAN wants Japan to import more manufactured goods, reduce existing barriers to all commodities and products as much as possible and substantially expand private investment and the transfer of technology. Moderates perceive the lack of market access as a function of Japan's general inhibition toward imports. More radical observers believe they detect conscious maintenance of a "colonial relationship" in the exchange of primary products for Japanese manufactured goods that are made up of those same primary products. The manufactures component of ASEAN's exports is on the upswing, but Japan's share of purchases continues to be mostly raw materials, particularly mineral resources (see Table 3).

Then there is contention over the services sector -- finance, insurance, shipping, consultancy and tourism, which some estimate to amount to $8 billion worth of business in ASEAN. When Brunei is discounted, Indonesia is the largest purchaser of services in the region. Singapore, on the other hand, has emerged as an aggressive new competitor for Japan in this sector. All of ASEAN's leaders want Japan to do something about getting the region a bigger share of the business in services, but exactly what Japan can do is uncertain.

Improved access to Japanese markets is certainly not always the answer. One example is finance. Since the 1970s Japanese banks have taken advantage of the slow rate of development of financial institutions in ASEAN to establish themselves in the region by a combination of perseverance and good service. Tokyo's recent moves to allow foreign corporations to do the same in Japan will not immediately benefit ASEAN. This kind of market access is designed for the most competitive American and European financial institutions, the ones with the technical sophistication and resources needed to compete in the Japanese market.

The bilateral trade outlook of the six ASEAN nations focuses more on red and black ink, but also betrays a commonality of interests. Malaysia and Indonesia are aware that, once their exports of oil and natural gas are discounted, they run substantial trade deficits with Japan. Their support for increased market access for manufactured imports stems from the difficulties Thailand, Singapore and the Philippines have faced in Japan on this score.

Thailand's persistent deficit has become a highly politicized, even emotional, issue, symbolized in the public mind by Japanese tariffs on boneless chicken. The deficit with Japan accounts for more than 60 percent of Thailand's overall trade deficit. Singapore's autocratic rulers will not allow public hysteria about their trade deficit with Japan, but their concern about access for manufactured goods and processed agricultural products is extreme. At the same time, they have a problem unique in ASEAN: they fear that they may lose preferential treatment as a developing nation because of their high growth rates and burgeoning per capita income. Despite the many other problems that burden the Philippines, there is strong awareness of the economy's dependence on foreign purchases of agricultural and mineral commodities such as iron ore and copper. Economic planners get little comfort from the narrowness of the Philippines' 1984 trade surplus with Japan.

Investment and Technology Transfer

Most often mentioned as the long-term solutions to trade problems are increased investment and technology transfers from Japan to the ASEAN member countries. The creation of employment, the stimulation of industry and upgraded technology are essential to rapid economic development, it is believed. With the exception of Brunei, the ASEAN countries have received the lion's share of Japanese foreign direct investment in Asia (see Table 4). ASEAN complains, however, that the full range of Japanese business has not taken advantage of the tax holidays and other incentives set up to encourage investment in their countries. Furthermore, they maintain that when Japanese manufacturers do put plants in their region, most input sourcing bypasses domestic suppliers and comes from Japan. They also argue that the advanced manufacturing technologies used in these facilities are not taught to host country employees and that most support services are purchased from Japanese companies.

Foreign investment by any corporation is, of course, a business decision based on such nonphilanthropic motives as profit and market access. While ASEAN has a rather convenient location, cheap labor and a steadily growing number of affluent consumers, major disincentives to investment remain. The possibility of nationalization of industries is no longer as pressing a threat as the time-consuming and costly presence of corruption in the government and the private sector of some nations. Government interference in business practices, such as requiring companies to be jointly or even majority owned by domestic interests, is frequently perceived as a major inhibition to investment. Complicated customs procedures and government policies concerning the use of such unusual trade mechanisms as countertrade have also made things difficult for Japanese business. A major barrier to technology transfer is the lack of enforced patent protection in ASEAN countries. Piracy is an especially major concern for corporations involved in computer software and other high technology industries.

The prospects for stabilizing the flow of Japanese direct investment in ASEAN countries are certainly dim when swings in international markets are added to these circumstances. Japan has somewhat defused criticism from ASEAN by focusing on several "big ticket" projects that require substantial capital investment from the Japanese private sector as well as government-to-government cooperation. Mitsubishi Motors Corp. provided the technology and trained personnel to manufacture the first "made-in Malaysia" automobile -- a project promoted assiduously by Prime Minister Matathir Mohamad. The first products of the joint venture rolled off the assembly line July 9. A joint venture in Thailand concerning the exploitation and liquefaction of natural gas was announced in Bangkok recently, and Japanese and Indonesian corporations are cooperating on the development of a new seaplane.

Examples of these kinds of high-profile projects are numerous. But the fact remains that ASEAN is competing with industrialized nations for Japanese investment -- and it is starting to lose out. Japanese corporate investors had pumped a total of $17.9 billion into the United States and Canada by the end of

March 1984 compared with the $16.4 billion invested in Asia. In recent years, North America has replaced Asia as the number-one location for Japanese foreign investment (see JEI Report No. 29B, July 27, 1984).

The Current Outlook

Japan's recent market opening measures are not only aimed at assuaging dissatisfaction in the United States: significant provisions are being made by the Nakasone administration to address issues of concern to ASEAN. Pressure mounted on Tokyo with the scheduling of the first general meeting of ASEAN and Japanese economic ministers in Tokyo June 27-28 and the annual ASEAN session for foreign ministers and "dialogue partners," such as Japan and the United States, planned for mid-July.

In late spring, high-level representatives of Japan's Liberal Democratic Party (LDP) paid visits to the ASEAN nations to sound out sentiments on trade issues and explain the April 9 market opening measures (see JEI Report No. 14B, April 12, 1985) in order to avoid harsh exchanges during the June ministerial meeting. The chairman of the LDP Policy Affairs Research Council declared after his well-publicized trip that Japan would have to act quickly on promises to provide fairer and greater access to ASEAN imports in order to avoid disruption of otherwise close and cooperative relations.

Another preparatory meeting was held in Tokyo by deputy ministers to set an agenda for the June meeting, and in late May Malaysian Foreign Minister Tengku Rithauddeen paid an official visit to Tokyo to once again underline ASEAN sentiments on trade issues. The concerns he expressed were representative of the region's complaints: high tariffs on certain commodities (in this case palm oil, a major Malaysian export), restrictions hindering manufactured goods from entering the Japanese market, and the large trade deficit between Malaysia and Japan in insurance, shipping and other services. He also urged increases in direct investment and expanded purchases of agricultural and industrial inputs. In response, Foreign Minister Shintaro Abe gave assurances that the Japanese government would present a market access package sensitive to ASEAN concerns.

The tariff reductions announced June 25, two days before the Tokyo meeting, include lower duties on boneless chicken (a concession Thailand fought for), bananas, an export important to the Philippines, and palm oil (see JEI Report No. 24B, June 28, 1985). Reaction from ASEAN government and business officials has been characterized as "lukewarm." Reaction from Indonesia, which had urged reduction of tariffs on plywood and other processed wood products, was one of frustration. According to Japanese officials, plywood tariffs, which are also of great concern to Malaysia, will not be addressed in this round of market opening measures in order to give the Japanese industry time to adjust to increased import competition.

These primary commodities and processed products, although substantial ASEAN exports to Japan, are more significant for their symbolic value. As with last year's negotiations between the United States and Japan on beef and oranges, these items have come to represent in ASEAN's view Japan's refusal to open markets reserved for politically powerful domestic agricultural producers. Economic arguments, such as those concerning the high costs to domestic consumers of restricted imports, have proved to carry little or no weight, so ASEAN leaders have adopted the American technique of relentless repetition and pointed politicization of single items in order to force Japanese concessions. This strategy, aided by the momentum of U.S. and EC demands on Japan, seems to be working.

Malaysia's complaint about palm oil was resolved when Tokyo announced that the existing 3 percent tariff will be eliminated next April. Kuala Lumpur is expected to continue its expansion of the palm oil industry, which last year provided approximately 3 percent of Malaysia's total exports to Japan.

Philippine President Ferdinand Marcos hailed Tokyo's tariff-cutting moves as a bolster to the country's tropical fruit exports to Japan. Starting in 1986, tariffs on bananas will be 12.5 percent instead of 17.5 percent during the time when Japanese banana producers are not harvesting fruit and 25 percent in place of 35 percent during Japan's fruit-growing season. This approximately 30 percent decrease was larger than that expected by those watching the discussions between Japanese farmers and government officials. Still, some disappointment was expressed that banana tariffs were not dropped completely. Expanding sales of bananas and other agricultural commodities were a major factor in the trade surplus the Philippines ran with Japan in 1984.

Bangkok's reaction to the reduction of the boneless chicken tariff from 18 percent to 14 percent was not quite so enthusiastic. Sales of Thai boneless chicken to Japan have increased sharply due to aggressive marketing, and the tariff cut will probably further boost sales by narrowing the price differential between domestic Japanese broiler meat and Thai imports. However, Thailand's chief problem in Japan is not with the Japanese industry but with bone-in legs from the United States, which face a tariff rate of only 11.3 percent. Thai officials are calling for further tariff reductions to enable their poultry exports to compete more effectively.

This aspect of Japan's tariff-reduction program is particularly upsetting to the ASEAN countries. The perception is that Tokyo's preoccupation with U.S. and European complaints for improved market access makes ASEAN third priority as trade barriers are dismantled. Some have suggested that the problems facing Japan and ASEAN are the natural outcome of a developed-developing country relationship. This factor, and the sheer volume of trade between Japan and other industrialized countries, lessens the attention given to ASEAN's market requirements. Until next year's elimination of palm oil tariffs, the Malaysian product has to compete with edible oils like soybean oil that enter Japan duty-free from the United States and other suppliers. The case of Indonesian and Malaysian plywood is also irksome; hardwood products from Southeast Asia face duties ranging from 17 to 20 percent, while tariffs on American and Canadian softwood plywood are around the 15 percent level.

ASEAN's appreciation for the efforts of the Nakasone government was therefore tempered by feelings that a great deal more must be done. During the two-day Tokyo meeting last month, officials emphasized market access for manufactured goods and reminded Japan that nontariff barriers, particularly standards and regulations concerning raw materials and food products, remain a significant limitation on ASEAN exports.

They also narrowed and intensified their demands for increased direct investment and technology transfer. ASEAN has called for Japanese attention to growing labor-intensive industries such as light machinery and parts assembly, processing industries, including furniture and foods that take advantage of plentiful domestic resources, and all-important export-oriented industries such as consumer electronics that have fueled the economies of other newly industrializing countries, including Korea and Taiwan. Emphasis was also placed on a rural-urban mix for development projects.

The economic ministers received assurances from their Japanese counterparts that along with continued reductions in import tariffs over the next three years, Tokyo will encourage regional investment by high technology firms as well as by small and medium-sized businesses. Foreign Minister Abe reiterated the government's intention to encourage the Japanese private sector by strengthening the Japan External Trade Organization (JETRO) and other trade-promotion organizations to facilitate the flow of information to companies interested in the region. With a well-marked reference to the "Fukuda Doctrine's" human resource development plank, he also proposed to step up the number of government-sponsored personnel exchanges.

It will take more than promises, however, to neutralize ASEAN's dissatisfaction with the current state of economic affairs. Prime Minister Nakasone's continued efforts to open Japanese markets will be under very close scrutiny in the region. However, retaliation from ASEAN of the kind that is being tossed around in Washington is highly unlikely. ASEAN is too dependent on Japan's markets for that to happen. But the threat the region holds over Japan is just as powerful, if harder to quantify. It is Japan's fear of once more losing face in Asia -- losing the chance to be seen as a benign sponsor and example to nations of the continent moving toward development. In short, it is Japan's fear of disharmony in its own environment, and the drop in economic and political influence that would go along with such a loss, that gives ASEAN nations leverage.

For further information, contact Sheri Hoptman.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Table 1: Japan's Trade with ASEAN, 1980-85

(in millions of dollars; exports f.o.b., imports c.i.f.)

	1980	1981	1982	1983	1984	First Quarter 1984	First Quarter 1985
Brunei							
Exports	$ 88	$ 93	$ 145	$ 86	$ 72	$ 20	$ 18
Imports	3,245	2,907	2,636	2,367	2,202	622	529
Trade Balance	-3,156	-2,814	-2,491	-2,281	-2,131	-602	-511
Indonesia							
Exports	3,458	4,123	4,261	3,552	3,073	786	547
Imports	13,167	13,305	12,005	10,432	11,175	2,998	2,694
Trade Balance	-9,709	-9,182	-7,744	-6,880	-8,102	-2,212	-2,147
Malaysia							
Exports	2,061	2,424	2,502	2,771	2,875	723	545
Imports	3,471	2,927	3,010	3,131	4,412	987	1,058
Trade Balance	-1,410	-503	-508	-360	-1,537	-265	-514
Philippines							
Exports	1,683	1,928	1,802	1,744	1,080	270	177
Imports	1,951	1,731	1,576	1,306	1,419	340	299
Trade Balance	-268	197	227	437	-338	-69	-122
Singapore							
Exports	3,911	4,468	4,373	4,448	4,610	1,108	965
Imports	1,507	1,944	1,826	1,468	1,775	564	378
Trade Balance	2,404	2,524	2,547	2,981	2,835	544	587
Thailand							
Exports	1,917	2,251	1,907	2,506	2,425	604	509
Imports	1,119	1,061	1,041	1,019	1,040	275	240
Trade Balance	797	1,189	966	1,488	1,385	329	270
Total ASEAN							
Exports	13,118	15,287	14,990	15,107	14,134	3,511	2,762
Imports	24,461	23,876	22,094	19,722	22,024	5,785	5,198
Trade Balance	-11,343	-8,589	-7,103	-4,615	-7,887	-2,275	-2,436

Source: Japan Tariff Association, The Summary Report: Trade of Japan

Table 2: Japan's Imports from ASEAN by Category, 1983-84

(in millions of dollars)

	Mineral Fuels	Food	Textile Materials	Ores and Scrap	Raw Materials*	Chemicals	Machinery and Transport Equipment	Other Manufactures	Total Imports (excl. fuels)	Trade Balance (excl. fuels)
Brunei										
1983	$2,362.7	$ 0.0	$ 0.0	$ 0.0	$ 1.8	$ 0.0	$ 0.0	$ 2.2	$ 4.0	$ 81.9
1984	2,197.4	0.2	0.0	0.1	0.6	0.0	0.1	4.1	5.1	66.7
Indonesia										
1983	9,061.4	346.2	22.8	539.7	407.6	8.6	0.4	45.5	1,370.9	2,181.2
1984	9,813.3	368.5	24.5	324.9	356.6	8.9	0.5	278.3	1,362.2	1,710.9
Malaysia										
1983	1,114.9	81.5	19.7	344.6	1,366.8	35.2	100.1	68.0	2,015.8	755.0
1984	2,217.7	69.9	22.4	161.2	1,513.5	36.5	123.0	268.7	2,194.4	680.4
Philippines										
1983	50.6	398.6	27.1	511.1	189.2	57.0	26.4	46.6	1,255.9	487.7
1984	47.0	448.1	27.8	403.9	251.6	69.9	31.1	139.4	1,371.6	-291.7
Singapore										
1983	1,093.1	31.1	5.9	25.8	15.0	98.0	119.5	79.2	374.4	4,073.8
1984	1,240.9	31.6	5.9	32.2	28.3	110.8	227.4	98.4	534.5	4,075.7
Thailand										
1983	0.0	433.0	40.1	64.6	358.6	22.2	14.5	85.6	1,018.7	1,487.8
1984	0.1	395.4	43.4	21.0	386.5	33.1	41.5	118.6	1,039.5	1,385.1
Total ASEAN										
1983	13,682.7	1,290.4	115.6	1,485.8	2,339.0	221.0	260.9	327.1	6,039.7	9,067.4
1984	15,516.4	1,313.7	124.0	943.3	2,537.1	259.2	423.6	906.7	6,507.3	7,627.1

*Includes such commodities as logs and lumber, wood pulp, natural rubber and nonmetallic mineral ores.

Source: Japan Tariff Association, The Summary Report: Trade of Japan

Table 3: Japan's Exports to ASEAN by Category, 1983-84

(in millions of dollars)

	Food	Textiles	Chemicals	Non-Metallic Mineral Products	Metals and Metal Products	Machinery and Transport Equipment	Other Manu-factures	Total
Brunei								
1983	$ 0.4	$ 0.2	$ 1.6	$ 1.0	$ 22.8	$ 59.0	$ 0.9	$ 85.8
1984	0.7	0.3	1.5	1.2	16.1	50.9	0.7	71.4
Indonesia								
1983	33.6	82.0	391.2	43.3	711.4	2,027.6	252.8	3,552.1
1984	27.8	85.6	362.6	36.0	619.7	1,698.2	243.2	3,073.1
Malaysia								
1983	24.1	70.6	137.1	44.9	510.0	1,836.2	147.9	2,770.8
1984	30.2	72.4	134.1	49.5	388.0	2,046.8	153.8	2,874.8
Philippines								
1983	8.5	91.8	183.8	22.0	309.1	976.7	151.7	1,743.6
1984	2.9	86.8	139.9	12.6	168.7	542.8	126.2	1,079.9
Singapore								
1983	64.0	261.1	219.9	159.3	676.0	2,606.4	461.4	4,448.2
1984	64.6	246.0	232.6	136.6	659.7	2,820.2	450.6	4,610.1
Thailand								
1983	24.8	82.8	265.9	28.1	548.7	1,414.6	141.4	2,506.5
1984	39.0	80.7	275.4	23.1	493.0	1,373.3	140.0	2,424.6
Total ASEAN								
1983	155.3	588.7	1,199.6	298.5	2,778.0	8,920.5	1,156.2	15,107.0
1984	165.1	571.8	1,146.1	259.0	2,345.3	7.532.2	1,114.5	14,135.4

Source: Japan Tariff Association, The Summary Report: Trade of Japan

Table 4: Japanese Foreign Direct Investment in ASEAN, FY 1979-FY 1983

(in millions of dollars)

	1979	1980	1981	1982	1983	Total March 31, 1984
Brunei	n.a.	$ --	$ 5	$ --	$ 2	$ 102
Indonesia	$150	529	2,434	440	374	7,641
Malaysia	33	146	31	83	140	904
Philippines	102	78	72	34	65	786
Singapore	255	140	266	180	322	1,705
Thailand	55	33	31	94	72	593
Total ASEAN	595	926	2,839	831	975	11,731
Total Asia	976	1,186	3,338	1,384	1,847	16,399
Percentage	61%	78%	85%	60%	53%	71%

Source: Ministry of Finance

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R E P O R T

NO. 28A July 26, 1985

U.S. AGRICULTURAL EXPORTS TO JAPAN: A REVIEW OF 1984 SALES

Summary

Another increase in Japan's already huge purchases of U.S. agricultural commodities in 1984 provided the margin of difference between a so-so year for farm exports and a fairly good one. Sales to Japan, which had bucked 1983's drop in total U.S. agricultural exports, advanced 8.3 percent last year to $6.8 billion, in the process helping to boost the overall farm export tally 4.8 percent to $37.8 billion. With this gain, Japan reinforced its position as the number-one foreign buyer of U.S. corn, soybeans, cotton, meat, hides and tobacco and as the second-largest export market for sorghum and fruits and vegetables.

Feed Grains

Projections of Japanese production of commercially prepared livestock and poultry feed -- the end use for three-fourths of the country's corn imports and virtually all of its sorghum purchases -- missed the mark more often than not in the early 1980s. Analysts and traders can be partly excused for their spotty track record since stretches of instability in international commodity markets and a new era of slow growth in Japanese demand for meat, eggs and milk played havoc with their assumptions. Still, forecasters were anxious to refurbish their tarnished reputations. They got that chance in 1984, correctly predicting that Japanese compound feed production would increase modestly despite much higher ingredient costs in the year's first half.

The accuracy of these forecasts hinged in large part on the continued use of feed industry stabilization funds to offset the run-up in U.S. prices for 1983 crop corn. Financed through assessments on feed manufacturers and buyers, these funds had allowed industry price leader Zennoh, a national federation of cooperatives controlling nearly two-fifths of Japan's feed market, to hold the line on bulk feed prices during July-September 1983 and to limit the increase for October-December deliveries to 5.4 percent. Thanks to a rise in stabilization payments, effective feed prices actually fell 2.9 percent in 1984's first quarter before going back up 2.5 percent for April-June deliveries. By that time, however, Zennoh was confident enough that 1984 crop corn prices in the United States would be below year-earlier levels to cut its list prices for July-December 1984 feed deliveries to Y74,100 per metric ton from the Y78,550 quote in effect since October 1983. Even with the elimination of stabilization payments, this reduction dropped effective prices below their Y75,350 second-quarter mark and helped to cap the increase in average 1984 effective prices at just 2 percent.

Feed prices paid by livestock and poultry raisers, which had stayed relatively flat in 1983, went up by roughly 3 to 5 percent, depending on the type of ration. Although feed represents the largest single cost of production for broiler and egg producers (about two-thirds) as well as milk producers (approximately half) and is the second biggest cost for hog- and beef-finishing operations (a third or so), total production costs were held in check last year by stable to lower prices for chicks, feeder pigs and feeder cattle and for labor. With production costs still under control, Japanese demand for commercially mixed feed remained on the upswing, shrugging off any dampening effects of the generally weaker prices received by livestock and poultry producers.

Purchases of poultry feed rose briskly in 1984 for the third consecutive year as broiler producers, responding to steady increases in demand, again increased their flocks, even though they had operated in the red in 1983 and apparently lost more money last year. The continued profitability of milk production encouraged dairy farmers to repeat 1983's measured expansion of the number of cows in milk, thereby giving another boost to sales of dairy rations. Demand for beef feed was also up for the third year in a row, although beef producers were still not covering their costs. In fact, purchases of beef rations increased strongly, reflecting a significant gain in the Wagyu herd and some increase in the number of dairy steers placed on feed.

More importantly, demand for hog feed, which accounts for just under 30 percent of the output of the Japanese compound feed industry, rallied in 1984 after two years of negligible gains. Having finally won the battle for profits, however, hog raisers remained cautious about increasing placements on feed, especially since rising pork imports and generally flat demand put some pressure on 1984 margins. Caution was the watchword among egg producers as well, but here the strategy had mixed results. With no growth in the national layer flock, egg prices reversed course and started to strengthen, but producers still failed to reach the break-even point. For feed mills, this development meant a second year of scaled-back sales to producers that had been their best customers, buying 30 percent of industry output.

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Even with the drag of reduced layer ration output, Japanese formula feed production expanded 2.4 percent in 1984 to 24.5 million metric tons, a new high, continuing a string of record-breaking performances dating to 1982, when volume advanced 4.7 percent to 22.7 million metric tons. (Some of last year's gain as well as a good part of the 5.4 percent jump in 1983 production to 23.8 million metric tons reflects the inclusion of steamed flaked corn in the feed data starting in April 1983.) As American corn exporters had discovered in 1982, however, new production records in the Japanese feed industry do not automatically translate into greater export opportunities. They certainly do not when relative feed grain prices are increasingly moving against corn.

Feed millers in Japan generally find it is more cost competitive to use extra sorghum rather than additional corn when sorghum prices average 93 percent of corn prices or less. In 1983 the ratio stood at 96.5, which boosted corn usage 10.7 percent to an all-time-high 11.4 million metric tons and dropped sorghum utilization 15.5 percent to 2.9 million metric tons. During most months of last year, however, the sorghum/corn price ratio was running below 90, and it ended the year at about 83.

This flip-flop in relative feed grain prices had all the negative effects U.S. corn suppliers feared -- and then some. Sorghum not only provided the added volume to expand Japanese mixed feed production. With the phase-out of Tokyo's surplus rice disposal program at the start of 1984, it also replaced the rice that had been a major compound feed ingredient in 1983 (0.75 million metric tons). To boot, feed millers substituted less-expensive sorghum for higher-priced corn at the margin, continuing a practice started in mid-1983.

The bottom line was that feed compounders expanded sorghum usage 52.5 percent to 4.4 million metric tons -- in the process lifting the sorghum content of feed to 17.9 percent from 1983's record low of just 12 percent. This jump gave American and other international sorghum traders the chance to more than make up for the earlier drop in Japanese sorghum purchases as imports rebounded 51.4 percent to 4.5 million metric tons, the highest level in five years. With U.S. prices below Argentina's for most of 1984, American growers reaped double benefits from the big increase in sorghum mixing, shipping 2.2 million metric tons worth $269 million to Japan, compared with only 0.6 million metric tons in 1983.

Stuck with prices that were increasingly uncompetitive, U.S. corn suppliers could only watch as the corn content of Japanese feed slid from a near-record 47.6 percent in 1983 to 46.5 percent in January and then steadily down to only 43.6 percent in December. The mixing ratio would have fallen even lower than 1984's 44.6 percent average, feed market analysts say, except for the fact that broiler producers are reluctant to have the corn content of their rations cut too quickly. As it was, the volume of corn going into compound feed declined 4.1 percent last year to 10.9 million metric tons. To make matters worse for American exporters, Zennoh and the trading companies that handle the rest of Japan's coarse grain requirements pared total feed corn imports by 6.7 percent to 10.3 million metric tons but cut purchases from the United States by a deeper 9.2 percent to 10 million metric tons in an effort to work down the above-normal stocks carried into 1984.

Anticipating a drop of this order in U.S. feed corn shipments, forecasters had ruled out the possibility that American exporters would duplicate their record-setting 1983 performance of 13 million metric tons. What analysts did not anticipate was that a third year of drought in South Africa would keep that country's maize suppliers out of the Japanese market for corn for manufacturing sweeteners, starch and other processed corn products -- leaving this trade, which represents roughly a fourth of Japan's total corn imports, solely in American hands. This break turned 1984 into a banner year for U.S. corn exports after all, as volume climbed 4.6 percent to 13.6 million metric tons and sales advanced 13.5 percent to $2 billion.

Even with South African exporters out of the Japanese industrial corn market again this year, U.S. corn exporters stand no chance of matching total 1984 shipments. To start with, Japanese production of commercially prepared feed is projected to increase very modestly this year, perhaps no more than 1 percent, although lower world prices for corn, sorghum and soybeans did allow Zennoh to cut list feed prices by an additional 4.3 percent to Y70,900 for January-June 1985 bulk deliveries. The output of swine and dairy rations is likely to go up by a small margin as hog farmers and milk producers continue to respond to favorable product/feed price ratios by slowly increasing their herds. Demand for broiler feed could level off, however, if Japan's big integrated producers make good on their price-propping plan to limit flock sizes. Moreover, production of beef rations is expected to decline since a jump in the Wagyu slaughter last year has trimmed cattle numbers and the size of the calf crop has fallen. But the major obstacle to anything more than a slight increase in aggregate feed production in 1985 is the still-weak feed demand of the egg industry, which is again trying to break into the black by limiting layer numbers.

A 1 percent or even a 2 percent expansion this year in Japanese formula feed output will not translate into additional sales for American corn suppliers. In fact, exporters will need luck just to come near their 1984 feed corn shipments since feed grain price ratios remain skewed toward greater sorghum mixing. Rye also continues to be priced competitively with corn, suggesting the likelihood that Japanese feed mills will substitute more of this grain for their major ingredient. The biggest damper, though, on U.S. feed corn sales might well be the emergence of a new competitor in the Japanese market -- the People's Republic of China. Japanese feed grain traders first contracted for volume supplies of Chinese corn early last year, and although shipments have been running behind schedule, buyers have placed several additional large orders for 1985 delivery. In a falling Japanese feed corn market, these new contracts can only come at the expense of U.S. exports.

Soybeans

The markets in Japan for soybean oil and soybean meal have moved out of synch with each other for the last three years, presenting oilseed crushers with the repeated dilemma of how to supply the requirements of the more buoyant market without flooding the weaker market. In 1982 oil consumption rose at a faster pace than the compound feed industry's demand for soybean meal. Wary of possibly producing too much meal that year by crushing enough soybeans to meet the demand for oil, processors limited the size of the crush and relied on imported soybean oil to meet unfulfilled domestic needs. In 1983 market conditions were the exact opposite. Oil consumption, which continued to expand, was not as strong as meal demand. Processors did increase the soybean crush to an all-time-high 3.9 million metric tons, producing record volumes of both meal and oil. They opted, though, to hold the crush below the level indicated by meal demand, afraid that oil stocks might become excessive.

This move proved fortuitous as market conditions shifted again last year. Another expansion in the output of blended oils and margarine, mayonnaise and other processed oil products kept Japanese demand for soybean oil on the upswing. Demand for soybean meal turned soft, however. To complicate matters further, oilseed processors were saddled with unusally large soybean meal stocks at the start of 1984, having misjudged feed industry demand in late 1983. Under normal circumstances, a gain in Japanese formula feed production like 1984's would have helped crushers resolve their dilemma by drawing down meal stocks and supporting stepped-up crushing. But as processors quickly learned, 1984 was not a normal year for feed market demand.

For most of 1984, protein meal was not priced competitively with other feed ingredients, including sorghum, which had the double advantage last year of a fairly high protein content. Equally important, relative protein meal prices generally favored greater use of fish meal at the expense of soybean meal. Rapeseed meal was also priced attractively until mid-year because of drought-triggered hikes in U.S. prices for 1983 crop soybeans. Soybean meal regained the price edge in 1984's second half as lower-priced 1984 crop soybeans came on the market. This encouraged some increase in usage, but feed millers continued to limit soybean meal mixing in an effort to minimize costs. On balance, therefore, the volume of soybean meal used in compound feed fell 5.7 percent in 1984 to under 2.5 million metric tons, while fish meal usage expanded 6.9 percent to 0.7 million metric tons and rapeseed meal consumption went up to 0.4 million-plus metric tons.

Besides dropping the soybean meal content of feed from 1983's 11 percent level to a ten-year low of 10.1 percent, the cutback in soybean meal mixing eliminated the possibility that oilseed processors could work down their big meal stocks -- even with a reduction in the 1984 crush. It meant as well that the surplus stocks of soybeans also carried over to last year could be drawn down only by trimming purchases from the United States, the supplier of all the soybeans crushed by the Japanese industry. This adjustment pushed U.S. shipments 7.6 percent below their 1983 record to 4.2 million metric tons, although sales declined just 3.1 percent to $1.2 billion because of higher export prices.

In a double blow to U.S. exporters, soybean oil sales did not provide the expected partial offset to reduced soybean shipments. In fact, rather than jumping as they did under somewhat similar market conditions in 1982, Japan's imports of soybean oil as well as its purchases of premium oils like cottonseed oil contracted last year, mainly because competition among crushers pushed Japanese oil prices below international ones. Rapeseed oil imports did increase, supplying some of the growth in Japanese demand for vegetable oils, but most of this expansion was covered by stepped-up domestic production of rapeseed oil.

Japan's total soybean imports, which contracted 9.6 percent last year to 4.5 million metric tons, are likely to fall another 0.2 or 0.3 million metric tons in 1985 since the glut of soybean meal continues to dampen demand for soybeans. U.S. exporters could see their sales fall by a bigger margin, however. Crushers were dissatisfied with the quality of the 1984 crop, and this has prompted periodic reports in the Japanese trade that some processors are prepared to sign contracts for volume shipments of Brazilian soybeans. American suppliers could also encounter more aggressive competition from Chinese exporters in the no-growth market for food-quality soybeans.

Meat

Meat consumption in Japan expanded by a healthy margin in 1984, enabling the market to absorb both increased domestic production and higher imports with only minimal downward pressure on prices. Beef demand was particularly strong. At-home consumption, which represents roughly three-fifths of sales, provided most of the momentum by rallying from its 1983 decline. This turnaround, apparently propelled by stable supermarket prices, was well-timed since Japanese beef production rose by an unusually large 8.3 percent to 536,000 metric tons, with virtually all of this gain again coming from a bigger Wagyu slaughter rather than from increased supplies of fattened dairy steers and culled dairy cows.

The growth in beef demand was not limited to the home market. Consumption at fast-food outlets and restaurants, the source of over a quarter of sales, continued to expand. So did processing use. With demand still rising in these two markets, imports were boosted for the second year in a row, this time by 5.9 percent to 146,000 metric tons. U.S. producers were the main beneficiaries of this rise, as shipments jumped 30.2 percent to 78,000 metric tons worth $322 million. (Trade classification differences make U.S. exports much higher than Japanese imports in this category and lower in the beef offal category.) Purchases from Australia, the dominant supplier, were also up.

The across-the-board increase in Japanese demand for beef also prompted a 2.7 percent rise in U.S. shipments of beef offals to nearly 35,000 metric tons valued at $77 million. Larger sales of diaphragm muscles from grain-fed carcasses (called hanging tenders and outside skirts by the trade), which account for an estimated 70 percent of this quota-free trade, apparently underwrote the gain. Family restaurants in Japan use this cut for low-priced steak dinners, while supermarkets package it for sale as formed steaks and marinated barbecue slices.

Japanese consumption of chicken continued to expand briskly as well, backed by strong demand from fast-food chains and restaurants, which generate approximately half of all sales. In addition, supermarket purchases, which represent another 40 percent-plus of the market, rebounded. Virtually all the growth in demand was covered by a 6.1 percent increase in domestic production to over 1.3 million metric tons, precluding anything more than a 3.1 percent rise in imports to 104,000 metric tons. This spelled trouble for the U.S. export industry, which had profited in 1983 from Thailand's supply problems. With Thai broiler shipments returning to their former levels and Brazil challenging this country for sales of bone-in legs, American chicken shipments fell 20.3 percent to 51,000 metric tons worth $72 million.

Pork consumption, although up in 1984, increased only marginally. Supermarket sales, which make up roughly half of the market, apparently leveled off in the face of high retail prices for domestic pork. Institutional demand was also flat and for the same reason. In fact, the processing sector, which uses perhaps 30 percent of total Japanese pork but up to half of all imported pork, was the only expanding part of the market. Under these conditions, it was not surprising that domestic production again rose by only a fractional amount to 1.4 million-plus metric tons while imports climbed 17.7 percent to 196,000 metric tons. This new import record was no cause for celebration among U.S. suppliers, however. Denmark, back in the market after an 18-month absence caused by an outbreak there of hoof-and-mouth disease, recaptured the largest share of the market. Moreover, Taiwanese exporters proved their 1983 sales jump was no fluke, again increasing shipments by a big margin. Left as a result with dwindling market opportunities, American shippers had to shoulder a 44.7 percent cutback in exports to only 19,000 metric tons valued at $62 million.

Japanese meat consumption is expected to increase again in 1985. Beef sales for both at-home and restaurant consumption remain on the rise. With domestic production projected to be down in the wake of last year's big slaughter, imports are likely to chalk up a sizable gain. Demand for chicken also shows no signs of weakening. This should trigger at least some additional increase in imports; how much depends on whether or not Japanese broiler producers succeed in their efforts to trim the growth of output. Even under the most favorable conditions, however, there will be little room for an expansion in U.S. shipments. American pork exporters will also have to remain content with their role as swing suppliers since higher Japanese production will probably cover any rise in pork consumption.

Wheat

It is no accident that discussions of the Japanese wheat market have a familiar ring from one year to the next. Through its control over the volume of wheat shipped into the country and the price at which it as well as domestic wheat are resold to flour millers, the government's Food Agency has tried in recent years to slow the decline in Japanese rice consumption at the expense of increased demand for wheat. It has limited the expansion of wheat allocations to the milling industry to less than the rate of growth in apparent demand for processed wheat products. In addition, the government repeatedly boosted wheat wholesale prices in the early 1980s by larger margins than rice resale prices in an attempt to tilt relative prices back in favor of rice.

The results of this policy are always the same: virtually no growth in wheat flour consumption and basically flat wheat imports -- along with a continuing decline in per capita rice consumption. In 1984, for example, bread production went up by a scant 0.7 percent, or by not much more than the average 0.6 percent growth rate of the four preceding years. The limited rise in the output of wet, dry and instant noodles, 1.2 percent, was also in line with recent increases, including 1983's 1.3 percent gain. Moreover, production of spaghetti and macaroni fell for the second year in a row, pulled down by heightened competition from lower-priced pasta imports, which are not controlled by the government.

Beyond the similarities, though, there were some interesting and perhaps potentially significant differences between 1984 and earlier years. For one, total wheat imports hit 6 million metric tons. Not only does this volume mark a new upper limit on the narrow band in which imports have fluctuated over the past 15 years, but purchases from abroad were increased against the backdrop of a bumper 741,000 metric ton domestic wheat harvest.

Also noteworthy is the fact that the government opted to keep the wheat resale price constant in 1984 and again this year while increasing the rice resale price, first by 3.8 percent and then by 3.7 percent. This move narrowed the negative spread between the government purchase price for rice and the resale price from 5.6 percent to 1.9 percent. More importantly from the current perspective, it also restored the wheat/rice price relationship to its pre-1980 level.

It is too soon to say whether these developments indicate that the government is getting ready to concede defeat in the battle to stem the fall in rice consumption or, alternatively, that it is prepared to allow market forces to play more of a role in determining Japanese wheat demand. Certainly over the short run U.S. wheat exporters cannot expect to ship much more than the 3.4 million metric tons, worth $0.5 million, they sold to Japan in 1984. Over the longer term, this might be a possibility.

Cotton

Despite huge jumps in imports of both cotton yarn and cotton fabrics in 1984, Japan's cotton spinners not only managed to operate in the black for the second consecutive year: they also widened their profit margins. Declining raw cotton prices helped the spinning industry keep production costs under control, but the key to increased profitability remained higher prices for yarn. Yarn prices, which had started to firm in May 1983 in response to voluntary production cutbacks, topped their year-earlier quotes in every month of 1984 through October. Full-year prices averaged an extremely healthy 11 percent more than 1983's norm, itself 2 percent-plus above the depressed 1981-82 level.

The spinning industry's return to profitability in 1983 hinged entirely on supply-side adjustments -- specifically, a 6.9 percent cut in yarn production to the lowest output level in at least 25 years; increased Japanese demand for cotton goods played no role in the turnaround. Last year, however, spinners got some help from the consumption side. While the production restraint program was trimming yarn output by an additional 0.2 percent, rising Japanese demand for cotton yarn, fabric and made-up goods was absorbing the expanded supply of cotton goods created by enormous imports. Average monthly inventories of cotton goods could therefore be worked down from the equivalent of 732,000 400-pound bales of cotton in 1983's second half to 727,200 bales in 1984 -- close enough to the industry's stock target of 720,000 bales to push yarn prices up to increasingly profitable levels.

Cotton spinners did not have much time to savor their fatter profit margins. By late 1984 the flood of cotton yarn from Korea and cotton fabrics from China had started to swamp the positive price effects of stronger domestic demand for cotton goods and on-going production restraint. With yarn prices continuing to fall below their year-earlier levels in the opening months of this year, traders turned cautious about contracting for raw cotton supplies, waiting to see whether spinners would try to cut production farther.

This wait-and-see attitude makes it extremely difficult to project Japan's 1985 raw cotton imports. Purchases will undoubtedly fall short of last year's 708,000 metric ton level; how much is the question. Sourcing is also certain to be more diversified than in 1984. Production problems in some other major cotton-exporting countries last year enabled U.S. growers to supply an unusually high 52.6 percent of Japan's cotton requirements through exports of 363,000 metric tons valued at $605 million. This year it will be hard for American exporters to maintain a 50 percent market share since shipments from Australia, Pakistan and China are expected to be up.

For further information, contact Susan MacKnight.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

APPENDIX

Table 1: U.S. Agricultural Exports by Country, 1980-84*

(in millions of dollars)

	1980	1981	1982	1983	1984
Total	$41,233	$43,337	$36,623	$36,099	$37,826
1. Japan	6,111	6,562	5,547	6,240	6,757
2. U.S.S.R	1,046	1,665	1,850	1,457	2,817
3. Netherlands	3,412	3,300	3,042	2,530	2,272
4. Mexico	2,481	2,432	1,156	1,942	2,015
5. Canada	1,836	1,989	1,805	1,829	1,929
6. Korea	1,798	2,008	1,581	1,840	1,650
7. Taiwan	1,095	1,145	1,155	1,308	1,458
8. West Germany	1,831	1,758	1,448	1,529	1,065
9. Spain	1,129	1,268	1,459	1,138	1,015
10. Egypt	771	967	800	943	877
11. Italy	1,094	1,177	941	713	795
12. Venezuela	701	893	671	665	777
13. Belgium-Luxembourg	600	852	904	833	747
14. United Kingdom	996	961	896	812	743
15. Portugal	608	757	576	660	694
16. China	2,210	1,956	1,498	544	613
17. Iraq	255	125	132	342	530
18. France	748	624	612	485	507
19. Brazil	680	711	526	479	504
20. Saudi Arabia	375	466	487	440	482

*Not adjusted for transshipments through Canada, the Netherlands or Belgium.

Table 2: Major U.S. Agricultural Exports to Japan, 1982-84

	Quantity (in metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	---	---	---	$5,547,178	$6,240,390	$6,756,462
Corn*	11,435,091	13,046,635	13,641,997	1,274,991	1,753,335	1,990,200
Grain Sorghum*	1,869,976	643,858	2,232,603	205,498	84,137	269,095
Soybeans*	4,104,928	4,585,133	4,235,897	977,878	1,220,163	1,197,549
Alfalfa Meal and Cubes	424,813	466,480	427,576	55,293	66,634	60,275
Dried Beet Pulp	336,351	364,829	403,187	49,422	51,382	58,185
Wheat	3,345,459	3,464,770	3,377,081	563,648	589,324	534,445
Barley	235,834	303,143	360,662	30,494	37,369	46,718
Cotton**	339,320	317,845	363,381	500,605	499,933	605,078
Beef and Veal***	52,362	59,645	77,640	232,396	253,475	322,206
Beef and Veal Offals***	31,503	33,624	34,538	96,992	83,948	76,941
Pork***	30,237	34,197	18,908	111,399	117,975	62,138
Chicken***	53,382	63,756	50,823	64,888	87,085	72,085
Whole Cattle Hides****	6,443,988	6,388,331	7,333,641	207,170	224,111	305,022
Inedible Tallow	69,346	56,365	40,833	33,882	23,872	19,544
Lemons	107,281	120,165	120,093	69,050	74,210	80,433
Grapefruit	139,792	168,546	144,713	47,340	59,668	51,362
Oranges	83,010	89,780	87,286	51,300	51,857	61,977
Raisins	15,477	17,839	16,686	25,850	22,649	18,412
Frozen Vegetables	71,515	82,024	83,530	53,851	61,650	59,525
Almonds	13,330	13,756	14,816	36,967	43,506	48,268
Tobacco	50,040	51,791	41,782	309,920	338,480	285,979

*Excludes seed.
**Excludes linters.
***Fresh, chilled or frozen.
****Quantity in number of pieces.

Table 3: U.S. Exports of Corn, 1982-84*

	Quantity (in thousands of metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	48,772	47,509	48,871	$5,579,853	$6,364,222	$6,987,927
Japan	11,435	13,047	13,642	1,274,991	1,753,335	1,990,200
U.S.S.R	7,128	3,032	10,119	834,625	404,438	1,389,842
Taiwan	1,902	3,266	2,865	238,328	430,296	424,102
Mexico	245	4,701	2,689	32,603	643,414	401,779
South Africa	-	868	2,529	17	126,508	366,139
Korea	2,880	4,074	2,200	331,713	559,678	327,316
Portugal	2,241	2,188	1,923	251,718	299,795	273,867
Belgium-Luxembourg	2,322	2,166	1,670	256,276	291,027	232,845
Spain	5,418	2,979	1,652	598,799	393,267	223,905
Egypt	1,181	1,586	1,517	136,157	205,844	219,965
Venezuela	423	1,130	966	50,703	154,731	146,514
Netherlands**	1,093	541	578	131,203	77,022	79,955
United Kingdom	1,108	725	569	119,667	97,309	78,642
East Germany	1,440	766	562	163,310	96,730	75,689

*Excludes corn donated for relief as well as seed and popcorn.
**Not adjusted for transshipments.

Table 4: U.S. Exports of Grain Sorghum, 1982-84*

	Quantity (in thousands of metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	6,015	5,280	6,792	$692,255	$699,067	$847,461
Mexico	1,413	3,294	2,163	165,498	438,615	283,315
Japan	1,870	644	2,233	205,498	84,137	269,095
Israel	340	441	591	40,473	54,607	73,644
Spain	520	119	392	58,307	15,683	46,605
Venezuela	502	287	339	62,054	39,717	42,021

*Excludes seed.

Table 5: U.S. Exports of Soybeans, 1982-84*

	Quantity (in thousands of metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	25,475	22,704	19,484	$6,217,747	$5,913,386	$5,419,175
Japan	4,105	4,585	4,236	977,898	1,220,163	1,197,549
Netherlands**	5,150	3,789	3,364	1,333,533	960,359	889,341
Mexico	287	943	1,578	75,782	234,653	474,303
Spain	3,205	1,944	1,642	743,522	520,748	439,719
Taiwan	1,127	1,375	1,313	285,560	362,647	390,637
Belgium-Luxembourg	1,405	1,111	898	327,756	286,082	240,932
West Germany	2,044	1,611	742	507,148	422,614	197,425
Korea	588	745	660	141,879	201,200	186,788
Portugal	470	701	609	114,676	181,370	162,564
Italy	906	595	583	209,861	154,647	157,095
France	897	515	541	205,359	131,230	147,097

*Excludes seed and soybean meal.
**Not adjusted for transshipments.

Table 6: U.S. Exports of Wheat, 1982-84*

	Quantity (in thousands of metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	40,653	38,314	42,046	$6,655,438	$6,213,587	$6,449,489
U.S.S.R	4,295	4,836	7,647	802,182	800,584	1,170,572
China	6,870	2,458	4,020	1,053,468	377,686	575,319
Japan	3,346	3,465	3,377	563,648	589,324	534,445
Brazil	2,552	2,626	2,561	429,097	423,196	395,834
Morocco	761	1,228	2,468	109,133	168,863	345,821
Korea	1,874	1,885	1,974	298,758	304,772	293,819
Nigeria	1,421	1,316	1,540	234,593	214,862	244,822
Egypt	1,806	1,919	1,324	276,945	292,811	181,930
Iraq	178	1,137	1,120	27,031	184,020	170,508
Venezuela	713	889	781	125,690	157,841	144,458
Bangladesh	676	423	1,030	90,725	57,968	143,046
Turkey	280	0	951	40,432	0	139,059
Indonesia	968	960	817	155,655	157,880	129,398
Philippines	914	846	714	155,403	145,448	121,601
Chile	1,074	1,016	820	169,551	159,026	121,383

*Excludes wheat donated for relief.

Table 7: U.S. Exports of Cotton, 1982-84*

	Quantity (in thousands of metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	1,392	1,201	1,497	$1,955,270	$1,817,087	$2,441,370
Japan	339	318	363	500,605	499,933	605,078
Korea	319	271	277	425,457	395,587	453,218
U.S.S.R.	-	45	100	67	72,223	167,407
Taiwan	175	73	110	208,322	93,094	157,065
Indonesia	66	61	70	99,641	97,670	118,966
Italy	25	27	68	37,227	40,911	112,486

*Excludes linters.

Table 8: U.S. Exports of Tobacco, 1982-84

	Quantity (in thousands of metric tons)			Value (in thousands of dollars)		
	1982	1983	1984	1982	1983	1984
Total	260	238	245	$1,546,541	$1,461,668	$1,511,067
Japan	50	52	42	309,920	338,480	285,979
West Germany	31	26	30	179,363	150,745	177,857
Spain	14	18	24	96,480	128,650	169,189
Italy	13	15	14	74,769	88,928	89,927
United Kingdom	14	13	14	74,943	72,585	83,147
Egypt	10	10	17	41,472	40,615	72,862
Taiwan	10	9	11	58,167	50,732	64,857
Netherlands	11	13	10	60,962	72,426	64,692
Switzerland	12	8	11	77,195	53,300	61,197

Source for Tables 1-8: U.S. Department of Agriculture

Table 9: Japan's Imports of Corn, 1980-84

(in metric tons)

	1980	1981	1982	1983	1984
Total	12,829,902	13,590,484	13,570,851	14,700,900	14,169,620
United States	11,673,980	12,128,449	10,956,001	13,438,302	13,736,803
South Africa	912,901	1,429,581	2,398,484	1,030,419	9,674
Feed Corn	9,701,010	10,375,268	10,316,152	11,010,917	10,273,531
United States	9,473,723	10,265,509	9,945,181	10,978,795	9,967,746
Corn for Industrial Use	3,128,892	3,215,216	3,254,699	3,689,983	3,896,089
United States	2,200,257	1,862,940	1,010,820	2,459,507	3,769,057
South Africa	908,402	1,343,876	2,228,717	1,027,525	9,674

Table 10: Japan's Imports of Grain Sorghum, 1980-84

(in metric tons)

	1980	1981	1982	1983	1984
Total	4,218,561	3,300,854	3,427,768	2,956,832	4,477,957
United States	3,813,207	2,854,701	2,180,117	656,076	1,860,473
Argentina	79,124	25,480	834,971	2,189,277	1,613,045
Australia	325,577	406,364	409,699	103,290	1,000,212

Table 11: Japan's Imports of Soybeans, 1980-84

(in metric tons)

	1980	1981	1982	1983	1984
Total	4,400,605	4,196,685	4,343,861	4,994,883	4,515,183
United States	4,225,611	4,021,865	4,196,406	4,646,134	4,180,630
China	100,289	113,290	111,912	287,971	307,863

Table 12: Japan's Imports of Wheat, 1980-84

(in metric tons)

	1980	1981	1982	1983	1984
Total	5,682,300	5,632,655	5,713,299	5,816,329	5,978,324
United States	3,479,236	3,394,374	3,417,255	3,347,809	3,432,904
Canada	1,339,773	1,351,309	1,308,694	1,485,708	1,484,726
Australia	990,151	881,820	987,350	982,812	1,060,694
Wheat for Food Use	4,436,989	4,400,367	4,419,111	4,549,127	4,708,290
United States	2,793,308	2,702,902	2,786,293	2,735,782	2,816,800
Canada	1,339,458	1,351,309	1,308,694	1,485,708	1,484,726
Australia	304,223	344,095	324,124	327,637	406,764
Wheat for Feed Use	1,245,311	1,232,288	1,294,188	1,267,202	1,270,034
United States	559,068	691,472	630,962	612,027	616,104
Australia	695,928	537,725	663,226	655,175	653,930

Table 13: Japan's Imports of Cotton, 1980-84

(in metric tons)

	1980	1981	1982	1983	1984
Total	719,135	699,708	784,134	666,281	707,973
United States	314,105	258,592	353,274	315,905	372,174
Australia	47,467	55,381	80,767	45,265	60,585
Nicaragua	3,820	29,122	26,315	43,320	50,569
U.S.S.R.	56,102	79,554	91,574	42,974	37,981
Mexico	56,998	60,938	41,439	28,356	37,673
Egypt	27,033	30,872	30,558	29,571	30,235
China	0	0	8	5,583	23,886
Sudan	18,434	16,737	13,966	18,035	19,381
Pakistan	73,355	41,076	35,464	45,690	14,736

Table 14: Japan's Imports of Tobacco, 1980-84

(in metric tons)

	1980	1981	1982	1983	1984
Total	65,178	83,320	83,466	80,062	75,175
United States	37,236	51,517	49,810	51,706	45,772
Greece	4,749	5,467	5,974	4,684	6,922
Turkey	3,808	5,440	5,716	5,357	5,262
Malawi	830	2,186	2,639	2,929	3,243

Source for Tables 9-14: Japan, Ministry of Finance

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FOREIGN LAWYERS IN JAPAN: AN INTERVIEW WITH JAMES V. FEINERMAN OF HARVARD LAW SCHOOL

Summary

While not a burning issue, the question of permitting foreign lawyers to practice in Japan has assumed growing prominence in bilateral relations, both as a practical matter and as a symbolic problem for U.S. service firms anxious to expand their international sales. JEI political analyst Michael W. Chinworth recently explored this issue and its implications for the two countries with James V. Feinerman, fellow and administrative director of Harvard Law School's East Asian legal studies program.

In an accompanying commentary, Akio Harada of the Ministry of Justice reviews access for foreign lawyers from the Japanese perspective.

Q. Given the rather unorthodox nature of this issue, what do you see as the most important factors involved in it?

A. In this area, as in so many others in U.S.-Japan relations, what really seems most important is the perception, not necessarily the reality, of openness. There has been a perception that Japan has zealously guarded the legal profession. American lawyers don't necessarily suffer from it, but American companies that are seeking to do business with Japan are at a disadvantage. And I think that makes certain sectors of the American bar feel disadvantaged in getting what they perceive as their rightful share of the legal business that would otherwise come to them from Japan -- not necessarily in Japan, but in the United States or elsewhere abroad. Because of their special expertise in certain areas of law, they are increasingly important to Japan.

Beyond that, the peculiar history of foreign lawyers in Japan since the war has added fuel to this fire. There was a period of great openness right after the war when a certain number of foreign lawyers, most of them Americans, became grandfathered in. Then the door shut when the occupation ended. I don't think that really mattered to most American legal professionals until the mid-1960s or so, when Japan's economic importance became quite apparent. And by that time it was a given that, except for the grandfathered lawyers, it was impossible for foreign lawyers to practice in Japan unless they were willing to go the arduous route of Japanese legal education and pass the Japanese bar examinations. Even then, their lack of citizenship would probably adversely affect them, even if they did overcome all these other hurdles.

In the early 1970s, certain American jurisdictions began opening up to foreign legal consultants -- notably New York -- and I think the pressures grew to try and work out some sort of accommodation for American lawyers to be active in Tokyo, although not necessarily to practice law. This was in some ways fostered by the fact that first Hong Kong and later Singapore, after some initial resistance from local lawyers, opened up to American firms interested in practicing there. Japan, as the largest economy in the region, obviously attracted a great deal of U.S. business and investment. American lawyers considered it the most logical base for servicing clients in Japan as well as elsewhere in Asia.

One thing that I should make clear at the outset is that there is a discrepancy between what the Japanese bar -- the Nichibenren -- thinks American lawyers might be doing in Japan and what American lawyers in fact want to do. I don't think it's ever been the interest of more than a handful of Americans to be fully practicing lawyers in Japan. There's no interest in going into court and there is certainly no question of ever litigating. The practice of American firms with overseas branches has always been to rely on local lawyers for that kind of representation.

But there is an area of international commercial practice where I think a handful of American firms really have a lock on the market. As the importance of Tokyo as an international capital market grows, and as the Japanese economy expands, U.S. law firms are becoming more interested in that business. And not necessarily only in Japan. It would also involve advising Japanese companies and corporations when they act outside of Japan. Law firms also like having a base to advise clients when they come to them for representation in the United States.

At first this might not have been too much of a sticking point because the style of Japanese law practice is very different from that in the United States. The very largest firms have maybe 20 people, compared to the behemoths in the United States that have 200 or 300 lawyers. And to do this kind of practice, it is always necessary to have a large corps of junior lawyers to

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draw upon. In recent years, though, a few Japanese firms have shown increasing interest in this type of practice. It is very interesting, very high-powered -- and also very lucrative. As their interest has grown, fears have correspondingly developed that if American lawyers are allowed even a consulting role in Japan, all this business will be sucked out by American firms, and there will never be a chance for the Japanese firms that are interested or that could eventually develop the expertise to get into that end of the business.

Q. In very rough terms, what dollar amounts would be involved?

A. Well, we're talking about potentially million-dollar fees for some complex transactions. Certainly fees in the tens and hundreds of thousands of dollars for single transactions.

Q. And industry-wide, how much would be involved?

A. Perhaps $10 million to $20 million in billings in any given year. This is obviously attractive to both sides.

Q. Compared with telecommunications equipment or automotive trade, though, the amounts are still rather small. Why should such a relatively minor amount raise such a problem?

A. Well, an analogy might be a kind of "infant industry" mentality. Some industries were protected in the 1950s and 1960s. Foreigners were held at bay until Japan developed to a level where it could compete internationally. The few law firms and lawyers who are opposing the admission of foreign legal consultants may be taking a similar approach: "We know that we are at a disadvantage now vis-a-vis some of the Wall Street law firms, but we'll never develop any kind of expertise if they're allowed to come in here and take over the market."

Q. A key distinction between this issue and usual trade matters seems to be the fact that in the U.S. legal system, individual states have the right to admit foreign practitioners. That is strictly a state matter. Wouldn't this restrict the right of the U.S. government to make demands on a profession in another country?

A. This has been a continuing problem, and I think it is not going to find any quick resolution. Admission to practice here is going to be limited state by state.

Q. As I understand it, there are some states that won't even accept practicing attorneys from other states.

A. Yes. Although many states admit lawyers who have practiced for a number of years in another state on the basis of a certain kind of comity or reciprocity, there are still states -- Florida, for example -- that won't accept an out-of-state lawyer even after years of practice, much less a lawyer from a foreign country. In fact, I think there are only three or four jurisdictions in the United States that have any provision at all for accepting lawyers from abroad. They happen to be the jurisdictions that are most interested in foreign trade. New York, as soon as the issue was raised, changed its standards to allow people to come in as foreign legal consultants, paving the way for New York lawyers to be able to practice around the world.

Illinois, which has traditionally been quite resistant and very close-minded about the admission of foreign lawyers, is now under considerable pressure from Governor Thompson to open up. He is a lawyer, a member of the Illinois bar, and feels that Chicago law firms may suffer vis-a-vis New York because of that state's greater willingness to admit foreign lawyers in some position.

Q. What is the situation in California?

A. I think that California has been slower to act than New York, but the door is open, at least partly, for foreign lawyers to come in. But aside from these few states and Massachusetts -- which provisionally allows foreign lawyers -- there are really very few states that have shown any willingness to allow foreign lawyers to practice. This works to the disadvantage of the United States. It affects, for example, the proposals that have been made about permitting foreign lawyers to practice in Japan. Japan has said that lawyers from any nation that has a federal bar system will be admitted to practice in Japan if more than half of that country's states or provinces admit foreign lawyers.

That means that New York lawyers, who constitute about 80 percent of the qualified lawyers in international finance in the United States, are kept out of Japan because states with no interest in international practice, like Montana and Arkansas, refuse to admit foreign lawyers -- who would probably not seek admission there in any event. And that can be a continuing problem. I can't see any way of changing the situation at the state level, short of action at the very top of the American Bar Association. And even there I think it would take so long, and its eventual effectiveness would be so dubious, that it wouldn't be worth trying to cause a massive shift in American state bar attitudes.

It is interesting that American lawyers who understand the attitude of state bars on this point tend to become curiously forgetful when confronting a very similar prejudice in Japan. There is some of the same market protection through the use of standards in the Florida bar as in the Japanese bar. But although it's the price of doing business in Florida -- you have to take the bar exam and be admitted as a Florida lawyer -- it seems ridiculous to American lawyers that Japan would impose a similar barrier to entrance.

The more interesting argument that I've heard -- and this may be the flip side of the "infant industry" argument -- is a kind of transfer of technology matter. A lot of lawyers have said that the Japanese bar can only benefit by admitting foreigners who will raise the general level of legal expertise in, for example, Tokyo's international and financial markets. The prime minister of Singapore, Lee Kuan Yew, made this argument to the Singapore law society, for example, when that bar was resisting the admission of foreign lawyers. Mr. Lee was more interested in the general benefits that would enable Singapore to become an international financial center, which it could not do without qualified lawyers.

Tokyo is not as dependent on the admission of qualified lawyers, but it is an attractive base for an international financial market, and that market will develop much more slowly without the expertise foreign lawyers can provide. I don't see the Japanese bar offering the kind of expertise that would be required to meet the demand created by a real international financial market in Tokyo. Foreign lawyers could fill this gap.

Q. Is there concern that the presence of American lawyers would influence the nature of the legal system itself, encouraging litigation over the more traditional means of negotiating in Japan?

A. Well, I've heard that concern raised, but I don't think that it has to be taken very seriously. First of all, as I mentioned at the outset, it's very unlikely that foreign lawyers from the United States or elsewhere would ever appear in the courts, other than as a member of an international arbitration body, and in such places they are already represented.

The one fear that might have some basis is that by bringing in a style of legal documentation that is heavily reliant on the Western mode of conflict resolution, the nature of international financial agreements to which Japanese companies are parties will change somewhat. But I think there too, Japanese banks and syndicates, for example, have been parties to international loan agreements governed by New York law with dispute resolution clauses that are decidedly Western. That is seen as one of the tickets of admission to the international financial market.

It could be seen by the Japanese bar as robbing Japan of some of its prerogatives, or robbing a potential Japanese borrower of its right to have a dispute in which it is involved governed by Japanese law. And it could lead to some increasing foreign influence on the style of dispute resolution, not in Japan as a whole, but in segments of the Japanese economy. But I don't think that fear is great enough to warrant keeping lawyers out; when it's been in their interest in the past, Japanese banks and Japanese borrowers have been willing to make concessions.

Q. I'm sure that some people would suggest that the only reason this has become an issue at all is because Washington has displayed an increasing tendency to press Japan on all fronts. Trade officials treat aluminum baseball bats and lawyers on the same level as telecommunications equipment and aerospace sales. How would you respond to that?

A. Well, the one point I'd make right off is that you have to remember who lawyers are in the United States, and this may be another telling difference between Japanese and American attitudes. The organized American bar is, if not the primary, then one of the two or three main opinion makers in this country. It is tremendously powerful and its influence extends to every locality -- to the highest levels of business and government. From the days of de Tocqueville on, its power has been disproportionate to its numbers.

One reason that Washington is pressing the issue is that lawyers have a voice to which the government is especially sensitive and tends to respond. But there is also a corresponding realization that if lawyers are satisfied, it may take some of the pressure off. You can turn the question around and say that it may be in Japan's interest to mollify this group. In the long run, its satisfaction with the arrangements in Japan will probably be more important than making American farmers happy, despite the disparity in numbers and everything else.

The ABA is a tremendous trade organization -- a quarter of a million American lawyers are members -- and the legal profession is one of the few professions where practically everybody joins the professional association. But in fact, it is only a very small segment of the American bar whose ox is gored by the current arrangements. And just as with farmers or manufacturers, people tend to pull together behind that small segment of the membership that is affected to present a united front. I can't see that anyone would believe that the fees that would be paid to American lawyers acting as legal consultants in Japan would make even the beginning of a dent in the trade deficit. But in terms of the influence of lawyers on American opinion generally, it probably would change perceptions markedly. And that's the important thing.

On the other hand, I think that American lawyers tend to be rather insensitive to the position of the Japanese bar, especially the position of the bar in Japanese society -- not realizing the kind of voice that Japanese lawyers have vis-a-vis their government and other institutions. American lawyers tend to equate the position of lawyers in the United States with the position of lawyers everywhere else.

The Japanese bar doesn't have the same kind of influence that the American bar has, and I think it is rightfully worried that it may become the pawn, the victim, of a government in which it has very little voice.

Q. In what types of practice are American lawyers involved in other countries?

A. Well, American lawyers can practice on a consulting basis in many countries, which is what I think they are interested in doing in Japan. It's a special position. The idea is that you act as a consultant on your own country's law to your clients. You do not advise anyone -- either foreign country nationals or your own country's nationals -- on local laws in foreign jurisdictions. Advice you'd give in New York, say, about French law would not be given in Paris to an American or any other national.

I think that by and large American practitioners have been fairly rigorous in observing this standard. They have, among other things, their own malpractice liability to worry about. If they do hold themselves out as experts on French law and give some bad advice, they're in trouble. So they're unlikely to do it. They'll go to foreign lawyers or advise their clients to go to foreign lawyers for that kind of advice.

In a few countries -- and I think that this is one of the things that the Japanese bar has been particularly fearful of -- American lawyers have been able to practice by combining with a local law firm. Depending on the country, in the Middle East for example, they have a very subservient relationship to the lead lawyer and are really just contract employees. But in other cases it is a collaborative partnership. From what I know about the Nichibenren proposals, the Japanese have quite adamantly opposed that possibility. There is no hint of a collaborative law business involving Japanese and foreign lawyers. The foreign lawyers will have their own offices; they will not even be allowed to hire Japanese nationals.

Both Singapore and Hong Kong had reservations about foreign lawyers because of the shared perception that Western lawyers might damage the indigenous legal system and legal culture. Initially the local law societies opposed their admission. Finally, it was agreed that foreign practitioners would merely be consultants. They would not be able to hire themselves out as solicitors or notaries, and they could only practice in the confined arena of international financial law. This mollified the local bar association.

I think, to their chagrin, they've seen this area grow in importance in the last ten or 15 years. When foreign lawyers first came to Hong Kong, it was not really a major international financial transactions capital. To some extent, the presence of these firms offering services for international loan syndicates, for example, produced tremendous growth. Now local lawyers would probably like to be a bit more involved in this area. But, as the Japanese bar fears, it has become the province of foreign firms. So it is a rather universal concern.

To get American lawyers admitted to practice overseas now, it is at least necessary for lawyers' home states to change their state admission practices. But very few states have shown a willingness to let foreign lawyers come in, even on a case-by-case exception basis. They cannot, in most cases, prevent a foreign lawyer who has graduated from an American law school from taking the bar -- and if he passes -- becoming a qualified lawyer. But in most cases, that's not the issue, and it's certainly not what American lawyers want abroad.

I doubt that there is more than a handful of people in the United States who could pass the Japanese bar, and even those who could probably wouldn't want to take all the time that would be necessary to do it. They want to be admitted for a few years for very limited purposes, and qualifying for the bar is just not necessary.

Interestingly, a couple of Japanese have been admitted to the New York bar, the first person last December. If there is any increase in that category, given the large number of Japanese students who are studying law at American universities, it may put the Japanese in a curiously anomalous position of saying, "Our nationals are taking and passing your state bars, so if you want to come to Japan and practice, there is an alternative course."

Q. Conceptually and culturally, what is it that distinguishes admission to the bar in Japan from other countries?

A. Well, two things. One is that in Japan, as in a number of other countries, it is not necessary to be a practicing lawyer to undertake a certain range of legal activities.

In some ways the Japanese system, or the British system -- which differentiates between solicitors and barristers -- says that if you're going to establish yourself as a lawyer, you should qualify yourself as someone who can go into court; that's the status of the bengoshi in Japan. That's what a barrister is in England, and it differentiates him from a solicitor.

But theoretically in the United States, anyone who has graduated from law school and passed the bar can step into the courtroom. It's the bane of our chief justice, who decries the low standards. In the Japanese context, it may be a way of keeping up the standards for the small number of legally educated people who are actually going to go out and practice law.

Aside from that, the Nichibenren has quite the same attitude as the American Medical Association: it has a valuable monopoly and it keeps it by controlling entrance to the profession. And, for the sake of its current members, it wants to keep the numbers down. To that extent, the bar examination is the most useful tool. Everyone has to pass through that conduit and by controlling the pass rate, you control the number of new entrants to the profession.

In a more macroeconomic sense, I think it's a way of funneling or channeling people's energies and talents. That is, there are large numbers of law graduates every year, but if there are limited opportunities for them to act as bengoshi, no useful purpose is served by taking them through two years of traditional legal training and preparation for the bar if, after passing it, there won't be any jobs.

Q. Would it also have an impact on the corporate sector? It would seem to mean moderate salaries, whereas U.S. lawyers often can do very well in the private sector.

A. Yes, but it also meets the needs of Japanese corporate employers who like having somebody with a little bit of legal background but who is flexible and can be moved around. I think someone who had been trained to become a bengoshi and then was admitted to the bar would be much more reluctant, probably, to take a variety of jobs in the corporate structure over his employment life.

On the other hand, somebody who has a law degree from a university but never went any further than that and joined a company right after graduation will be content to work in the legal department if necessary, but will also be willing to take assignments elsewhere. That may be very important. Industry does not want to narrowly channel its people. That's one of the hallmarks of the Japanese corporation. In fact, it may be one of the reasons for Japanese industry's great success. It has these capable generalists.

Q. How accessible is the European market to American lawyers?

A. It's all across the board. England and France have been the two jurisdictions in which the largest number of American lawyers and law firms have chosen to practice. Historically they have been pretty receptive. There have been American firms with branches there for 20 or more years.

There is a handful of lawyers in most of the other Common Market countries, but it's more difficult to predict their admissibility. In contrast, it's quite clear what you have to do if you want to set up an office in France or in England, and you can follow the experience of firms that have gone before you. There are a couple of firms that practice in Brussels because that's the seat of the European Community, and they have been welcomed there, too.

In many cases American firms have to hook up with some sort of global lawyer, who can be the entree into the local bar and provide a cover for the firm. A couple of firms -- most notably Baker & McKenzie, which is probably the American law firm with the largest number of foreign branches -- have consistently pursued a policy of doing just that. They hook up with a local law firm rather than send out people from the U.S. office, and find people already there who are conversant with American law and the law of the local jurisdiction.

Q. Can part of that British and French liberality be explained by the fact that so much U.S. law originated in Europe?

A. I'm not sure. Certainly in England it is, with the Commonwealth system. I'm not quite sure what accounts for it in France, except that Paris has always been a very desirable spot, a place that even firms with London offices were interested in because of its centrality and the amount of international financial activity that takes place there. French lawyers are every bit as nationalistic and provincial as the bar might be in Japan or in any other country. But there the foothold is quite well established. Foreign law firms are entrenched there.

In a way, it would be better to look at this as the exception to the rule. It generally is not possible for people to practice in jurisdictions in which they are not admitted. American law firms take it for granted that they can just go to a foreign country because their firms have branches in London and Paris. But in most of the world, it is impossible, although outside of Japan, there is enough play in the system that you can do it under cover: you hook up with a local lawyer, open an office and call yourself a consulting firm rather than a law firm. There are dodges. The reason push has come to shove in Japan is because all the legitimate avenues are closed, and all the backdoor techniques that might be used would very quickly be discovered by the organized bar.

Q. If indeed the Japanese bar has relatively less influence with its government than the American bar has in the United States, why is it not possible for the Justice Ministry to dictate a solution? The ministry seems to be deferring nearly 100 percent to the bar association on this issue.

A. Well, I think there are a couple of explanations. One is that it is not solely an issue that the Justice Ministry is capable of resolving. Since the ministry has been pushed by the U.S. government and by American lawyers into the trade realm, I think that in a way American firms may have done themselves a disservice and upped the ante. That is, drawing in more people on Japan's side to be concerned about an issue that could have been left alone.

But second, I think that the willingness to defer to the Nichibenren is a manifestation of Japanese concerns that this vulnerable area of Japanese professional practice -- a part of the Japanese economy -- might seriously suffer from an influx of experienced financial law experts from the United States.

That's a factor that tends to be discounted by the American side, but I think it is sincere. Perhaps there are people in the Justice or Finance ministries who could help in the assessment, but the Japanese bar knows the situation and is the best judge of what will happen if there is a large influx of foreign lawyers. Although the bar association may tend to magnify the fears -- and there is an aspect of this that amounts to protection of a monopoly -- Nichibenren's concern is really not surprising.

I think the big question is whether other areas of the Japanese financial market are willing to put pressure on the lawyers' association and really force it to move on this, or if they're so interested in preserving their relationship with the Japanese lawyers they work with that they will accede to their wishes and support them. Eventually some sort of accommodation will be worked out -- as long as Japanese lawyers can see that some benefit will accrue to them -- just because it is so much in everyone's interest.

There is a system for foreign lawyers to practice for a year or two with Japanese firms as legal trainees. I think this system has been acceptable to the Japanese bar so far because it's controlled by Japanese lawyers. But I think some other accommodative situation could be worked out to allow foreign lawyers to get some legal training in Japan. A solution can be reached that assuages the fears of the Japanese bar, but also makes some headway in meeting the demand of foreign lawyers who want to be in Japan.

* * * * * *

LIBERALIZING THE LEGAL PROFESSION

Commentary by Akio Harada of the Ministry of Justice

It is claimed that Japanese barriers to foreign lawyers are formidable. This first became an issue in 1974 when the New York bar notified the Japanese Federation of Bar Associations (JFBA) of a newly established rule to license foreign lawyers to practice foreign law in New York as legal consultants without being admitted to the bar. New York encouraged JFBA to take similar measures. JFBA declined the recommendation in 1977, saying it was premature to take action and that the New York rule was still exceptional even in the United States. The United States Trade Representative has raised this as a bilateral trade issue since 1982.

There are roughly two systems regarding law practice. One, as in most European countries, is to let anyone engage in the practice of law if he/she does not use a title reserved to those in a certain field. The other system, used in Japan, the United States and Germany, is to restrict entry into the profession, licensing only those who are qualified to provide legal services. Japan established the present system in 1933.

The underlying rationale of the restrictive system is that the public should be protected from unqualified or irresponsible legal advice. For this purpose, the system requires that a lawyer be certified as sufficiently educated and trained as well as be subject to professional ethics and discipline.

If a country is to maintain such a system, it must prevent unqualified individuals from entering the profession, even if in practical terms it means restricting competition. This consequence, however, must not be construed as the purpose of the system. No one can ignore the fact that international legal service is becoming more and more significant. If the formal system of one country cannot cope with this trend, it must be adjusted accordingly.

Under the present law, JFBA and its members enjoy almost complete autonomy concerning their activities. The government -- including the judiciary -- has no control over licensing, although education and training are reserved to the government. This is the product of postwar reform by the Diet in 1949. This is why the government has been respecting the voluntary initiatives of JFBA on the issue.

The Special Committee of the JFBA has made public recommendations regarding possible reform of the present system. Although it basically follows the New York rule, it is premature to comment on each of the recommendations because the conditions and requirements of the new system will be revised to reflect additional domestic and international considerations. However, it is significant that the Special Committee recommended that the profession should be liberalized in spite of strong opposition among the members. Its other recommendations were made on this assumption and will be considered by a number of other participants, including the Ministry of Justice.

It has been suggested that JFBA is nothing more than a protective guild that should be excluded from any role under the new system. I am afraid this might be taken as a gratuitous insult. It is more constructive to encourage JFBA to react responsively to changes and the future of the profession, even if on a step-by-step basis.

On the other hand, the argument can be made that the U.S. legal system has already been liberalized because bar examinations in most states are comparatively easy for foreign applicants to pass, especially compared with the virtually non-existent possibility of foreigners passing the Japanese Judicial Examination. Those who observe this difference might feel that it is unfair for JFBA to insist on reciprocity by individual states.

JFBA's insistence on reciprocity, however, should be taken as a reflection of the concern and anxiety of U.S. lawyers in jurisdictions where proposals like the New York rule have been rejected or not yet considered. In light of these circumstances, JFBA would take it as a promising development if states with close economic and cultural relationships with Japan would at least consider liberalization.

It is inevitable and desirable to seek the most reasonable system in which local and foreign lawyers can cooperate in rendering international legal services to the public. But in overcoming cultural differences and backgrounds in the two societies, standards must be preserved and certain prerogatives of the systems must be respected.

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APPENDIX

Comparison of the number of people in the legal profession in the United States and Japan is a bit more complicated than it appears on the surface. The term "lawyer" as used in this country covers a broad range of areas that the Japanese have chosen to subdivide.

People Involved in Legal Work, 1982

Practicing Attorneys (Bengoshi)	11,745
Tax Attorneys	36,024
Patent Attorneys	2,427
Judicial Scriveners	13,520
Administrative Scriveners	16,088
Governmental In-House Legal Advisors	2,200
Corporate In-House Legal Advisors	6,000
Judges	2,688
Public Prosecutors	2,000
Law Professors	2,500

Bengoshi are specialists in criminal defense and civil law. Tax and patent attorneys are distinct from *bengoshi* in that they represent clients only in their particular fields. Judicial and administrative scriveners prepare correct forms and documentation for those citizens wishing to petition the courts on their own. As in the United States, in-house legal advisors serve the purpose of aiding organizations in business and public relations matters. Judges and public prosecutors, also *bengoshi*, perform functions similar to their U.S. counterparts.

Like most educational advancement in Japan, the process of becoming a *bengoshi* involves entrance examinations with a miniscule pass rate. Aspiring law students begin with an undergraduate curriculum that emphasizes the study of historical and present civil, criminal and commercial codes and constitutional law; they receive little exposure to the liberal arts. To be admitted to the sole law school in Japan -- the Legal Training and Research Institute -- students must pass the national legal examination (*shiho shiken*). The number of applicants passing the test is set at 500. The typical student takes the entrance exam at least three or four times. The average age of the successful applicant is nearly 28.

Shiho Shiken Success Rate

Year	Number of Applicants	Number Passing	Success Rate
1949	2,514	265	10.5%
1954	5,172	250	4.8
1959	7,819	319	4.1
1964	12,728	508	4.0
1969	18,453	501	2.7
1974	26,708	491	1.8
1979	28,622	503	1.7
1984 (estimated)	35,000	500	1.4

Once a student is accepted in law school, there is a two-year apprenticeship in areas of legal drafting, trial discourse and other practical matters concerning the role of a bengoshi. The only other obstacle is a final examination, but the success rate for this is nearly 100 percent. From there, graduated students may choose to become assistant judges, public prosecutors or bengoshi.

While approximately 60 percent of all bengoshi are registered in Tokyo and Osaka, providing a 1-to-2,200 ratio in Tokyo, in many rural prefectures the ratio is one bengoshi for every 40,000 people.

It is also interesting to note that law firms, even in Tokyo, rarely exceed five to seven members. Solo practitioners are common, and the overall average number is 2.7 lawyers per office.

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Japan's Stimulating Debate Over Economic Policy

Despite the strong recovery Japan has been enjoying for the past 18 months, Japanese policymakers have been locked in debate over one problem: how to sustain the rebound while reducing dependence on exports. The most obvious answer is to stimulate domestic demand. Prime Minister Yasuhiro Nakasone, however, has made fiscal austerity a hallmark of his administration, effectively removing increased deficit spending from Tokyo's arsenal of economic policies. This has led to a vigorous search for alternatives, specifically tax reform (see article this issue), deregulation and looser monetary policy.

- Tax fairness - MOF is proposing changes that would make it much more difficult for self-employed workers and farmers to conceal income. Tougher penalties are also being considered. The problems with this issue are political. Farmers and other self-employed workers are staunch supporters of the ruling Liberal Democratic Party (LDP). Some LDP members, however, advocate adopting the reforms in order to win the support of the increasingly important "salary man."

- Indirect taxes - In order to recoup the revenues lost through an income tax cut and to augment receipts, the introduction of a major new indirect tax is under consideration. A value-added tax, higher commodity taxes and a host of other consumption taxes have been suggested as options. Although a European-style value-added tax (which is applied at both the manufacturing and distribution stages) was originally the front runner, a tax on value added only during the production phase has gained ground. Such a tax is more politically palatable since the burden appears to fall only on the business sector. Of course, producers will almost certainly pass on the cost of the tax to consumers through higher prices.

- Tax preferences - The Japanese have recently heard a great deal of criticism about their high propensity to save. Multilateral organizations as well as individual countries have linked Japan's trade surpluses to its savings surplus. Officials respond that the country's high savings rate is a primary reason for the country's impressive economic growth in the postwar period. Other countries, they retort, do not save enough. Nevertheless, many Japanese analysts advocate tearing apart the web of savings incentives. Economic efficiency is best served, they feel, when saving and consumption decisions are made freely. They point out that Japan's consumer finance system is so underdeveloped and the population aging so rapidly that the average Japanese is not likely to change his thrifty ways any time soon. In addition, the revenue gained by eliminating the savings incentives could be applied to the national debt.

Mr. Nakasone, contemplating his chances of gaining a third term as prime minister, is pushing for the introduction of some reforms in fiscal 1986 -- leaving him less than nine months to hammer out a consensus. The debate will be heavily influenced by the results of the Finance Ministry study, which will in turn be heavily influenced by Mr. Nakasone. The political obstacles are daunting, however. As Mr. Reagan is discovering, a host of other issues can easily sidetrack any movement toward real tax reform.

Jon Choy

Japanese Foreign Direct Investment Continues To Boom

While U.S. direct investment abroad has been stuck in a slow-growth pattern since the start of the 1980s, Japanese foreign direct investment has taken off, jumping from a rather modest $31.8 billion in March 1980 to $71.4 billion five years later. In FY 1984 alone, Japanese corporations added a record-shattering $10.2 billion to their overseas equity holdings as all the factors executives weigh in considering foreign investment signaled go. Strong U.S. economic growth and improved market conditions in other areas of the world

Japan's Foreign Direct Investment by Country, FY 1980-FY 1984

(in millions of dollars)

	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	Total March 31, 1985
United States	$1,484	$2,354	$2,738	$2,565	$3,359	$19,894
Canada	112	167	167	136	184	1,575
North America	1,596	2,522	2,905	2,701	3,544	21,469
Panama	222	614	722	1,223	1,671	4,916
Brazil	170	316	322	410	318	4,274
Mexico	85	82	143	121	56	1,220
Peru	3	4	185	0	6	685
Bermuda	6	32	5	14	29	453
Latin America	588	1,181	1,503	1,878	2,290	13,020
Indonesia	529	2,434	410	374	374	8,015
Hong Kong	156	329	400	563	412	2,799
Singapore	140	266	180	322	225	1,930
Korea	35	73	103	129	107	1,548
Malaysia	146	31	83	140	142	1,046
Philippines	78	72	34	65	46	832
Thailand	33	31	94	72	119	711
Taiwan	47	54	55	103	65	647
Asia	1,186	3,338	1,384	1,847	1,628	18,027
Saudi Arabia/Kuwait	63	50	41	66	55	1,234
Iran	71	0	0	1	0	1,003
Saudi Arabia	15	45	57	90	43	357
Middle East	158	96	124	175	273	2,927
United Kingdom	186	110	176	153	318	2,766
Belgium-Luxembourg	77	211	191	391	386	1,575
West Germany	110	116	194	117	245	1,170
Netherlands	41	138	73	113	452	1,074
France	83	54	102	93	117	751
Switzerland	28	67	79	37	229	602
Spain	22	39	19	52	140	423
Europe	578	798	876	990	1,937	9,072
Liberia	110	466	434	323	281	2,296
Africa	139	573	489	364	326	3,198
Australia	431	348	370	166	105	3,153
Oceania	448	424	421	191	157	3,718
Total	4,693	8,931	7,703	8,145	10,155	71,431

Source: Ministry of Finance

Japan's Foreign Direct Investment by Industry, FY 1980-FY 1984

(in millions of dollars)

	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	Total March 31, 1985
Manufacturing Sector	$1,706	$2,305	$2,076	$2,588	$2,505	$22,048
Food Products	54	142	78	77	118	1,002
Textiles	91	91	67	174	85	2,055
Wood Products	78	65	76	91	115	1,106
Chemicals	314	228	322	450	223	3,849
Metals	493	521	468	479	718	4,805
Nonelectric Machinery	102	207	164	169	185	1,619
Electric Machinery	309	475	267	502	409	3,234
Transport Equipment	176	406	439	486	437	2,746
Other	89	169	195	160	215	1,633
Nonmanufacturing Sector	2,777	6,516	5,478	5,357	7,429	46,800
Agriculture/ Forestry	39	75	40	18	26	768
Fisheries	34	36	22	17	24	399
Mining	565	2,534	685	382	484	11,158
Construction	37	96	44	55	112	703
Trade/Sales	797	1,174	1,899	1,164	1,482	11,128
Banking/Finance/ Insurance	380	843	533	1,167	2,085	7,054
Services	926	623	702	622	681	4,021
Transportation		722	924	1,363	1,651	4,660
Real Estate		167	354	375	430	1,326
Other		246	276	193	454	5,583
Branch Offices	119	110	149	200	221	1,989
Real Estate Transactions*	91	---	---	---	---	595
Total	4,693	8,931	7,703	8,145	10,155	71,431

*Overseas real estate transactions have been excluded from Japan's foreign direct investment data since December 1, 1980 because of changes in the Foreign Exchange and Foreign Trade Control Law.

Source: Ministry of Finance

exerted an enormous pull on Japanese businesses, regardless of their field. Higher corporate earnings and narrowing investment opportunities at home provided an equally big push; so did the continued appreciation of the yen through the summer of 1984. In addition, the spreading threat of protectionism in the United States and Europe gave Japanese manufacturers an extra incentive to invest in offshore production facilities.

The United States remained the prime location for Japanese foreign direct investment in FY 1984, attracting an all-time-high $3.4 billion (see accompanying table). In a repeat of the April 1983-March 1984 period, Japanese companies earmarked roughly $1 billion for the construction or acquisition of U.S. production facilities. Most of this money again went into factories to manufacture metals and fabricated metal products, industrial and consumer electronics products, automotive equipment and chemicals, with Nippon Kokan K.K.'s purchase of a 50 percent interest in National Steel Corp. for $273 million representing the largest manufacturing investment of the fiscal year. Japanese corporations also continued to expand their foothold in the American banking, finance and insurance sector, investing an estimated $0.6 billion; half of this amount underwrote the acquisition of BanCal Tri-State Corp., the holding company for California's eighth largest bank, by Mitsubishi Bank, Ltd. Another $0.6 billion or so was channeled into the U.S. sales organizations of Japanese companies.

Japanese businesses also added a record $1.9 billion to their European holdings during the year ending in March 1985. Financial institutions were the major investors here, putting $1 billion into banking, finance and insurance subsidiaries and affiliates. More money was invested in production facilities, but the $0.3 billion addition paled in comparison with the amount going into the U.S. manufacturing sector. Europe and the United States were on a more equal footing when it came to the expansion of commercial enterprises since Japanese distributors invested $0.4 billion in European sales organizations.

While stepped-up activity in the United States and Europe was the main impetus behind the big jump in Japanese foreign direct investment in FY 1984, a large volume of capital continued to flow into the economies of Latin America and Asia. Japanese investment in Latin America, in fact, set a new record of $2.3 billion. The transportation industry remained the region's major magnet, attracting $1.3 billion in funds, although $0.3 billion did go into the manufacturing sector. Japanese corporations pursued a more diversified investment strategy in Asia. One-third of the $1.6 billion invested in this area during the April 1984-March 1985 period went into production facilities, with most of the rest divided among the services, financial and mining industries.

The huge flow of funds going into the United States during FY 1984 reinforced North America's position as the top location for Japanese foreign direct investment. As of this past March, corporate investors had a $21.5 billion stake in the United States and Canada. Sales offices still accounted for the biggest block of money -- $6.6 billion-plus, but there was ample evidence of the evolving investment strategy of Japanese businesses. One indication was the $6.5 billion invested in the manufacturing sector, an amount split almost evenly between the electronics, transportation equipment and metals industries and other industries. Another sign was the $2.7 billion that had gone into the banking, finance and insurance sector.

Asia, the leading overseas investment site for Japanese corporations through March 1983, held onto the number-two spot in FY 1984 despite the upsurge in activity in Latin America and Europe. Out of the $18 billion that had been invested in this region, $7.1 billion was in metals, chemicals, textiles and other manufacturing operations and $5.9 billion in mining. Trailing Asia was Latin America, where Japanese firms had equity holdings of $13 billion, concentrated in production facilities ($4.2 billion), especially steel and nonferrous metals, and transportation services ($3.5 billion).

With $2.5 billion going into offshore factories during the April 1984-March 1985 period, the manufacturing sector continued to represent the leading edge of Japanese direct investment activity (see accompanying table). By the end of the fiscal year, Japanese corporations had funneled nearly $22.1 billion into manufacturing plants abroad, including $7.1 billion in Asia, $6.5 billion in North America and $4.2 billion in Latin America. Mining projects and sales operations remained a distant second to manufacturing facilities as the destination for Japanese foreign investment funds. Just over $11.1 billion had been invested in mining through this past March, divided between Asian countries, mainly Indonesia, and the rest of the world, while an equal amount had gone into the commercial sector, with three-fifths in American and Canadian sales subsidiaries and affiliates. The fourth-largest concentration of money -- $7.1 billion worth -- was in overseas banking, finance and insurance organizations, anchored by investments of $2.7 billion in both North America and Europe.

Susan MacKnight

Court Rules Election Unconstitutional; Electoral Reform Pressures Mount

On July 17 Japan's Supreme Court ruled unconstitutional the results of the December 1983 lower house election because of the Diet's failure to reapportion election districts to reflect shifts in the voting population. The decision will not affect the actual election results or actions taken by Diet members elected in 1983; the court noted that overturning the results simply would be impractical. It does increase pressure on the Nakasone government to enact legislation to eliminate disparities in the relative representational strength of lower house districts.

The court ruling came in response to superior court decisions originating in 21 election districts throughout the country -- the majority in the Tokyo metropolitan area. Petitioners claimed that the election results were not constitutional because urban areas are significantly under-represented in lower house election districts. The court agreed, reaffirming a position similar to its 1976 ruling that cast doubts on the constitutionality of lower house elections held four years earlier.

In Japan's treatment of constitutional issues, "unconstitutional" does not necessarily mean invalid. Hence the election results, although determined to have violated voters' constitutional rights to equal representation, were not overturned altogether. However, it is doubtful whether the lower house could be dissolved -- a step that is tantamount to calling for elections -- before instituting some type of reform. Several justices said in individual

Japanese Investment in U.S. Automotive Assembly Facilities

Parent	Subsidiary	Location	Product Line	Annual Capacity	Employment	Investment	Start Date
Honda Motor Co., Ltd.	Honda of America Manufacturing, Inc.	Marysville, OH	Compact cars Subcompact cars	150,000 (current) 300,000 (1988)	2,500 (current) 3,000 (1988)	$490 million	November 1982 Mid-1986
Nissan Motor Co., Ltd.	Nissan Motor Manufacturing Corp. U.S.A.	Smyrna, TN	Compact pickups Subcompact cars	180,000 (current) 240,000 (spring 1987)	3,000	$585 million	June 1983 March 1985
Toyota Motor Corp. General Motors Corp.	New United Motor Manufacturing Inc.	Fremont, CA	Subcompact cars	100,000 (current) 200,000 (early 1986)	1,500 (current) 2,500 (early 1986)	$400 million	December 1984
Mazda Motor Corp.	Mazda Motor Manufacturing (USA) Corp.	Flat Rock, MI	Compact cars	240,000 (fall 1988)	3,500 (fall 1988)	$450 million (estimated)	Fall 1987
Mitsubishi Motor Corp. Chrysler Corp.	Undecided	Undecided	Subcompact cars	180,000 (1990)	2,500 (1990)	$500 million (estimated)	Fall 1988
Toyota Motor Corp.	Undecided	Undecided	Compact cars	200,000	Undecided	Undecided	1988

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JAPAN-CANADA RELATIONS

Summary

Japan and Canada have maintained relatively close political and cultural relations in the modern era. Japanese emigration to western Canada was in part responsible for increased contacts, although it manifested many of the same tensions that accompanied similar migrations to California.

In recent years, Canada has played a significant but not overwhelmingly important role in the Japanese economy. Although trade balances consistently favor the Canadians, Ottawa is dissatisfied with the mix of trade and investment between the two countries. However, there is no indication that present sales of Canadian resources to Japan in return for manufactured imports are likely to alter in the near future.

Early Relations

Lured by the promise of a better life, Japanese nationals first entered western Canada in 1877. By the turn of the century, several thousand Japanese had taken up residence in western Canada, almost all of them in British Columbia. It was this movement that first stimulated active interest in diplomatic relations with Japan, although Canadian concerns were primarily negative. The "gentleman's agreement" of 1908 set a limit of 500 Japanese immigrants a year, stabilizing a potentially explosive situation. Scars from those early years, including internment during World War II, however, influenced postwar relations and even now persist.

Trade relations were marginal during this period, but gathered steam with the establishment of diplomatic relations in 1929. Official ties were terminated with the war but were quickly re-established in 1953. A 1952 trade balance overwhelmingly in Canada's favor rapidly dipped to a two-to-one margin in 1956 and has remained in Canada's favor in every year but one since then.

The Trudeau Era

Canada took greater notice of the Pacific in general and Japan in particular with the installation of the Trudeau government in 1968. The new prime minister proposed strengthening ties with Pacific nations and diversifying Canada's global trade by turning east as part of the "third option" -- a foreign relations posture designed to retain the country's historically close relationship with the United States while expanding ties in new spheres. Concerned by the extent of American influence in Canada, but realistic enough to accept the fact that such conditions were unlikely to change, the Trudeau government sought new markets for Canadian exports and broader political influence abroad through the third option. By expanding economic ties, particularly with Asia, the prime minister hoped to minimize the economic impact of the United States and make the country more self-sufficient in both political and economic terms.

Although the Trudeau government waxed enthusiastic over its new policy, realities remained virtually unchanged. While turning to Asia may have been an option for Canada, a combination of economic and political factors prevented the country from being a serious alternative import source or investment site for Japan. The most serious limitation was Tokyo's perception that the Canadian government was hostile to outside investment, as typified by the stance of the Foreign Investment Review Agency.

This agency was designed to assist foreign investment while preserving Canadian policy notions on the nature of economically desirable projects, i.e. manufacturing (or at least additional processing of mineral resources). The board was perceived, however, as a political bureaucracy shrouded in red tape, rebuffing the activities of potential investors. More importantly, the Trudeau government itself, especially in its later years, was seen by Japanese business interests as an inherently unstable and combative impediment to broader economic relations.

Consequently, the Trudeau decade failed to fulfill the optimistic proposals it offered in the late 1960s. While the third option concept in both its political and economic forms may yet prove viable, it has not affected economic realities. Investment is at traditionally marginal levels and trade patterns remain unchanged. Canada, as far as Canadians are concerned, is a minor economic colony of Japan's, supplying raw materials and providing markets for Japanese manufactured exports.

The Conservatives Enter the Picture

A few changes have taken place since the 1984 election of the Progressive Conservative government of Brian Mulroney, of which, the most

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important is the reorganization of the Foreign Investment Review Agency. Now called "Investment Canada," the board is promising greater assistance to potential investors with fewer strings attached. The conservatives promise to emphasize provincial development consistent with local needs, but a more market-oriented approach to what is "suitable" or "unsuitable" for Canada. They promise further that fully 90 percent of the companies once subjected to the government's review process will be released entirely. While the government remains committed to extracting manufacturing investment from Japanese companies in theory, it is not likely to turn down offers in traditional sectors.

But the third option has apparently been retained. External Affairs Minister Joe Clark recently outlined the current government's approach to bilateral relations:

> Canadians and their new government are committed to their Pacific destiny. Our focus on the region has been strong and will remain so. We are determined to put the required policy instruments in place to advance social, economic and political cooperation. Our commitment and determination are not idle words or half-fulfilled ambition. We have a challenge to devise a clear and comprehensive strategy that places a sustained and unprecedented emphasis on the Pacific rim in general and Japan in particular as cornerstones of both our national and foreign policies.

When examining that "clear and comprehensive strategy," however, some observers have suggested that it is rhetorical. In many respects, Canada appears to be rediscovering Japan, rather than building on a strong base of economic and political ties. A combination of circumstances explains Canada's difficulties in stimulating more extensive ties with its principal Asian partner. The third option -- a clear flop -- most likely would have succumbed in any event to Ottawa's internal difficulties even if it has been more promising on the diplomatic front. Domestic economic problems in the Trudeau years, which still have not been resolved, focused attention on more fundamental problems. Unemployment reached levels exceeding 25 percent in some provinces and averaged in the double-digit column for several years in such politically sensitive areas as Quebec. (The unemployment rate remains high by any comparison at about 11 percent nationwide.)

In addition, the Quebec secession dispute may have cost the Canadian government in international relations. At one point, the fragile unity of the country seemed on the verge of unraveling to some Japanese. Many U.S. observers were equally concerned that Quebec would pull away from the federal government, leading to a series of withdrawals that would ultimately have dissolved the better part of the country. These fears did not come to pass, but the issue consumed such intense political energies and attention that Ottawa's focus on the Pacific in general and Japan in particular dimmed.

A final consideration is that Japan's economic interests in Canada, until recently, have centered on only a few of the country's 12 provinces, primarily British Columbia, Alberta and Ontario. Some analysts suggest this has given the private sector and the Japanese government little reason to be overly concerned about relations with Canada as a whole.

Canada's own confused political conditions contribute to this problem. Canadian provinces traditionally have maintained considerable autonomy, far more, most political scientists agree, than individual states in this country. Thus "Canadian" negotiating teams may include not only members of the central government but also individual representatives from one or more of the provinces affected by the talks. The resulting difficulties in presenting a unified Canadian position can well be imagined. Consider a delegation from the United States attending a Tokyo round of trade talks accompanied by the governors of all fifty states, not simply to observe the talks, but to take an active part in them. That, some say, is both the blessing and curse of Canadian nationhood, and it cannot help but influence relations with Japan.

Tokyo has not been seriously accused, so far, of trying to secure economic and political advantages by launching a "divide and conquer" strategy that pits individual provinces against one another. (That charge has been levied against the United States and West Germany.) While not a conscious policy, however, circumstances could produce the same results. It may not be necessary for Japan to pursue a national approach to Canadian economic questions as long as it cultivates friendly relations with the provinces consistent with investors' economic and political needs. The mirror image of that argument, of course, could be equally true: Canada may be incapable of drafting a unified approach toward Japan to establish, much less pursue, national economic and political interests.

Trade and Investment: Current Status

From the Japanese perspective, trade with Canada is not of overriding importance, nor is it to be neglected or taken for granted. Canada is Japan's eleventh-largest export market and seventh-largest source for imports. Overall trade ranks well behind such countries as the United States, China and Saudi Arabia. Japan exported $4.3 billion in 1984, while importing nearly $5 billion -- a comfortable amount but nothing in comparison with U.S.-Japan figures (see table).

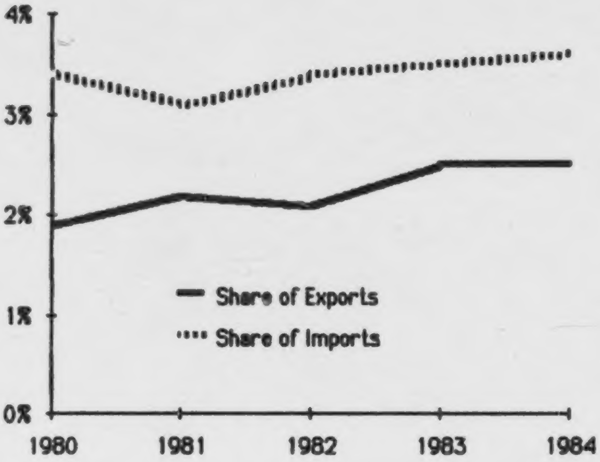
From the Canadian side of the ocean, Japan ranks as the country's second-largest trading partner -- although a distant second to the United States. Japan's share of total Canadian trade is 5.3 percent. Canada is a major supplier of wheat, coal and other staples of Japan's industrial and consumer diets. It is not an insignificant market for Japanese automobiles, a political issue with implications similar to those afflicting the United States.

Investment between the two countries lags far behind the trade figures. Canada is the location for just $1.6 billion of Japan's total overseas direct investment, a fraction of the $19.9 billion invested in the United States and well behind the $3.2 billion directed to Australia, a country with similar political and economic concerns vis-a-vis Japan.

Not only is investment limited, but it is heavily concentrated in resource development, much to the chagrin of Canadian policymakers who have been severely critical of decisions to put money into such areas as coal mining and tar sands development at the expense of job-creating investments in manufacturing. Even some of these projects fail to please Canadian analysts.

The tar sands commitment, for example, is brushed off as "minor league stuff" by one observer, even though limited investment is doubtless better than none at all.

Canada's Share of Japan's Total Trade
(in percent)



A potential $3 billion liquefied natural gas (LNG) project in Alberta illustrates the thrust of Japanese investment in energy-related fields. This spring, Mobil Oil Canada Ltd. announced an agreement with Petro-Canada Ltd. to establish a consortium of Canadian natural gas producers and Japan's Nissho Iwai Corp. to determine the viability of shipping LNG from Albertan and British Columbian fields to Japan. Mobil and Petro-Canada would each have a 30 percent interest in the project, Nissho Iwai and Westcoast Transmission Ltd. 15 percent each and Suncor Inc. the remaining 10 percent. The contract calls for annual shipments to Japan of 2.35 million metric tons for 20 years, beginning in 1989.

The project demonstrates the mixed blessings of trade with Japan from the Canadian perspective. Japan is likely to remain a steady customer for LNG because of its own policy emphasis on diversifying energy supplies, both in terms of supplier countries and types of energy sources. Thus, it can be counted on to retain long-term interest even though LNG may be more costly than traditional energy sources, such as Middle East oil. This should be good news, but some Canadians would still prefer to see more funds directed to the manufacturing sector.

To some degree, Canada alone can be held responsible for this situation, if indeed it is the object of strong public concern. Japan can hardly be blamed for energy resource development, given its energy needs and the fact that fully 30 percent of all investment in Canada is in energy. Tokyo, it could be argued, is simply following the outline that Canada has advanced under its National Energy Plan. This measure was drafted to stimulate exploitation of Canada's vast resources while preserving national prerogatives over the long term. The fact that it is limited in its job-creating impact is secondary to the facts of life in Canada: the country possesses immense surplus energy reserves. Exports are a sensible alternative, despite the lack of benefits in some areas and, some suggest, the damage to national pride that comes from exporting raw materials rather than finished products.

Similar arguments and concerns manifest themselves in automotive trade. Since 1981, car shipments have been limited under restraint agreements similar

Japan-Canada Trade, 1980-84*

	1980	1981	1982	1983	1984
Total Exports	$2,436.6	$3,399.0	$2,860.7	$3,624.9	$4,297.3
Crude Materials and Fuels	11.1	6.9	7.5	8.7	8.0
Light Industrial Products	317.7	380.6	318.2	407.6	480.0
Textiles	70.5	93.7	85.7	101.6	107.1
Heavy Industrial Products	2,057.6	2,969.5	2,490.0	3,157.4	3,748.9
Chemicals	77.3	91.7	88.5	110.7	116.1
Metals and Metal Products	338.0	480.9	306.1	203.0	243.9
Steel	249.8	372.0	203.4	103.5	141.9
Machinery and Transportation Equipment	1,642.3	2,396.9	2,095.4	2,843.8	3,388.9
Motor Vehicles	644.1	1,013.8	796.0	983.6	1,120.0
Power Generating Equipment	22.8	43.9	38.4	69.8	165.0
Office Machinery	46.9	61.6	66.3	116.4	115.2
Motorcycles	86.8	127.8	139.1	172.6	174.4
Scientific and Optical Equipment	149.5	181.1	115.7	147.7	183.0
Vessels	16.2	39.6	76.0	256.2	174.7
Total Imports	$4,724.2	$4,463.9	$4,440.5	$4,429.7	$4,945.1
Food	1,197.1	1,485.1	1,423.0	1,369.2	1,447.5
Wheat	322.8	348.5	285.4	309.4	314.3
Industrial Supplies	3,334.4	2,869.3	2,876.2	2,899.9	3,244.2
Crude Materials	1,979.7	1,507.3	1,394.9	1,341.2	1,404.7
Mineral Fuels	744.2	770.2	841.3	882.4	1,166.6
Chemicals	192.6	220.8	220.5	246.3	267.1
Metals	268.3	241.9	296.9	253.3	254.6
Capital Goods	132.0	62.0	96.5	76.9	102.3
Consumer Nondurables	10.4	15.7	12.6	8.1	8.0
Consumer Durables	22.9	20.6	12.8	11.4	17.8

*In millions of U.S. dollars. Exports are valued f.o.b. and imports c.i.f.

Source: Japan Tariff Association, The Summary Report: Trade of Japan

in some respects to those between the United States and Japan. Suggestions in 1985 that Tokyo would not continue the restraints raised a furor in Canadian circles. Officials ultimately agreed to a vaguely worded arrangement whereby Japan is expected to limit its exports to 18 percent of the Canadian market for the 12 months ending March 31, 1986 -- roughly 180,00 to 198,000 cars (based on Canadian government sales projections) -- or some 6 to 16 percent above the fiscal 1984 level.

Canadian officials have tied the prospect of higher import figures to increased automotive investment in Canada (see JEI Report No. 25B, June 29, 1984). At present, only Honda Motor Co., Ltd. has begun building an assembly plant for compacts in the country, due to open in 1987. Toyota Motor Corp., however, recently announced plans to build an assembly facility for subcompacts at a yet-to-be-selected site, with startup scheduled for 1988. A General Motors Corp.-Suzuki Motor Co., Ltd. joint venture has been widely rumored in Canadian industry circles, but no plans have been declared as yet.

A new complication is the emergence of Hyundai Motor Co., a Korean car manufacturer, as an exporter to Canada. Because Korea is considered a developing nation under Canada's generalized system of preferences, Hyundai faces neither restrictions nor duties on its exports there, a condition that causes considerable frustration to Japanese firms whose automobiles face a 10.7 percent tariff. This gives the Korean manufacturer a $500 to $650 price edge on its principal export to Canada, the Pony. Hyundai is also committed to investing in Canada and plans to build a $25 million parts manufacturing facility and to source 50 percent of its needs from Canadian firms. Hyundai sold only 25,000 units in 1984, but expects that number to reach 40,000 in 1985, a healthy jump equivalent to 25 percent of Japanese sales.

Some more diversified Japanese companies have also entered the Canadian manufacturing sector. Mitsubishi Electric Corp., for example, has completed work on a television tube plant in Ontario, but such cases, from Canada's viewpoint, remain few and far between and are unlikely to resolve fundamental complaints. As one observer noted on Japanese investment in the country, "it has been a long and arduous process."

A final complaint is that Japan simply will not buy Canadian manufactured goods, high-tech, low-tech or otherwise. For several years, promoters of the CANDU light-water nuclear reactor felt that Japan should be a logical market, given its strong emphasis on nuclear power generation. Japanese companies, however, favor American nuclear technology. Canadian patriots feel that Japan Air Lines Co., Ltd. (JAL) should be interested in the DASH short- to medium-range commercial airliner for domestic flights in Japan, but JAL and other domestic buyers have favored U.S. purchases when looking at overseas aircraft and increasingly may have domestic options in future purchasing decisions.

On the manufacturing side, both Canadians and Japanese alike have noted that a major obstacle to increased Canadian exports of manufactured goods to Japan is the fact that American subsidiaries dominate several industrial sectors that could export competitively to Japan. They charge that these American affiliates, when spotting a prospective sale in Japan, shift the order to the U.S. base, racking up a credit for the United States instead of Canada.

As a result, Canada's trade with Japan in manufactures suffers. (Some U.S. observers note that Canada should not complain; at least it has a surplus in its trade with Japan.)

The Triangle's Third Side: The United States

Perhaps the single most important factor in Japan-Canada relations is the fact that for both countries, the United States -- like it or not -- is the most important political and economic partner. Consequently, the U.S. factor is considered primary by both countries and decisions made by one or the other are often viewed through the U.S. lens. In investment, for example, the United States simply is a more important location for both Canada and Japan, resulting in limited investment flows between the two. The United States is the principal market for both countries, giving it greater political leverage in trade disputes than might exist otherwise. (Hence, Japan will promise a numerical limit on automobile exports to the United States, while only committing vaguely to a general market share in Canada's case.)

This is what undermined much of Prime Minister Trudeau's third option and will continue to influence the course and pattern of Japan-Canada economic relations. Indeed, the third option was defined frequently in terms of Canada's relations with the United States: neither hostile, nor overly accommodating, but distinct from the bilateral relationship. The realities facing Canada and Japan are simply put: the United States comes first for both.

Limits on Growth

Persistent economic problems add to Canada's dilemma. While trade and investment are likely to grow, Canada's persistently high unemployment, costly wage structure, strong union presence and relatively high inflation -- combined with less than dramatic economic growth -- all conspire to limit the Japanese presence in Canada. Critics say that Japan has invested in other regions of the world -- Latin America, for instance -- where investment conditions are less than favorable. But these decisions reflect private-sector priorities and the business community's judgment of the long-term market potential. From a broad perspective, the Canadian market simply may not be as important to Japan as other markets.

Consequently, the outlook for future relations, while far from bleak, may not be as rosy as some Canadians would like. Japanese economic development will continue to emphasize high value-added products in manufacturing, while diversifying and expanding in services, a growing area. Private-sector officials apparently view Canada's worth, at least for the near future, in terms of its natural resource potential with limited shifts into processing. Some Japanese processing of aluminum ingots, for example, has shifted to Canada, but such examples are limited and it is likely that for the mid-term, Japanese industry will focus primarily on mining rather than processing of raw materials or non-mining activities.

In trade terms, this assures stable markets in Japan for certain Canadian products, although trade flows could easily assume a pattern that parallels the U.S.-Japan situation. Prices on resource contracts, especially in energy-related fields, could easily drop; at best, stable or only slightly higher prices are foreseen for the immediate future. Japanese exports to Canada, however, promise to assume greater value and diversity, suggesting that while the overall Canadian market might be limited, bilateral trade flows increasingly could tilt to Japan's favor.

Even in resources, Canada could remain simply a Japanese hedge against domestic shortfalls rather than its sole supplier, suggesting limited growth possibilities. The experiences of the oil shocks remain firmly implanted on corporate and policy memories in Japan, and the country is unlikely to consciously place itself in a position where it is entirely dependent on a limited number of suppliers. This would also dampen growth potential somewhat, even though Canada is likely to remain politically friendlier to Japan than many other governments. On the manufacturing side, Canada can forget CANDUs and DASHes. Japan seems satisfied with its present options in those sectors and related areas.

The prospects for relations in the future, then, suggest no dramatic changes. This is not necessarily a disadvantage to either country, although it falls short of Canadian hopes and expectations. Given Ottawa's relative lack of political clout vis-a-vis Japan, one must begin pondering the possible reactions of the Canadian government should its trade balance with Japan begin bleeding red for several years in succession. Many Canadians are convinced, in the words of one writer, that "Japan remains unwilling to regard Canada as anything more than a resource hinterland of the United States and is not yet disposed to consider Canada . . . as a sophisticated industrial nation, distinct and separate from the United States." While that conclusion may not accurately reflect Japanese perceptions of the relationship, it certainly suggests that more work is needed on both sides before the promises of an earlier decade come to fruition.

For further information, contact Michael W. Chinworth.

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The views expressed in this report are those of the author and do not necessarily reflect those of the Japan Economic Institute.

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JAPAN · ECONOMIC · INSTITUTE

JEI

REPORT

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Japan's Action Program Formally Unveiled

U.S. government and industry officials who dismiss Tokyo's July 30 "action program" for improved foreign access to the Japanese market as no different than its six empty predecessor packages should take a second look at the current version. In most areas, the new list of market opening measures, scheduled by the government this past April (see JEI Report No. 14B, April 12, 1985), goes beyond the statements of principles that normally constitute Japan's liberalization initiatives to detail the specific steps that will be taken. The July package also contains a timetable for change spanning the next three years -- another first. Perhaps most importantly, Prime Minister Yasuhiro Nakasone has pledged that implementation of the action program will be overseen at the highest political levels to prevent bureaucratic footdragging

Cabinet Adopts Stringent Fiscal 1986 Budget Guidelines

The stark numbers emerging from the guidelines for preparing Japan's fiscal 1986 general account budget came as no surprise to Japanese and American observers: austerity remains the keyword of Prime Minister Yasuhiro Nakasone's fiscal policy. The Ministry of Finance (MOF) continued to shave funds from most budget categories, but the axe bit most deeply into money to run the government. On the other hand, six areas not only escaped funding cuts but are earmarked for growth. The composition of spending is a clear indication of Mr. Nakasone's priorities (see table) and one that is likely to be hotly debated.

FY 1986 Budget Guidelines

(increase or decrease in billions of yen)

	FY 1985	FY 1986
Overall Discretionary Outlays	Y280.0 (0.9%)	Y480.0 (1.5%)
Current Government Outlays	-410.0	-390.0
Public Works Expenditures	-360.0	-350.0
Subtotal	-770.0	-740.0
Personnel Costs	120.0 (1.6%)	77.0 (1.0%)
Pensions	410.0	435.0
Official Development Assistance	60.0 (11.4%)	58.0 (10.0%)
Alternative Energy Development	35.0 (8.0%)	20.0 (4.4%)
Defense Costs Mandated by International Treaty*	267.0	306.0
International Science and Technology Cooperation	18.0	17.0
Subtotal	910.0	910.0
Defense	205.5 (7.0%)	219.6 (7.0%)
Disaster Relief	240.0	210.0
Special Budget Requests	-100.0	100.0

*Annualized costs of providing support personnel and base facilities for U.S. armed forces in Japan.

Source: Ministry of Finance

Overall discretionary spending (total outlays less debt service costs and transfers to local governments) will rise by Y480 billion ($2 billion at $240=$1.00) to just over Y33 trillion ($138 billion). This translates into a 1.5 percent initial increase, better than fiscal 1984's 0.9 percent final rise. Beneath this increase, however, budget winners and losers stand in sharp contrast.

The biggest losers for the second year in a row are current government outlays, which include the ministries' operating budgets, and public works spending. MOF again sought and received a 10 percent reduction in government outlays and a 5 percent dip in public works funds. These two spending cuts will reduce FY 1986 outlays by Y740 billion ($3.1 billion), smaller than FY 1985's Y770 billion achievement.

Increases totaling Y910 billion ($3.8 billion) will be distributed among pensions, defense, personnel salaries, official development assistance (ODA), alternative energy development and science and technology. Although the single most difficult issue was defense spending (see following article), ODA outlays were also the subject of intense bargaining. Foreign Minister Shintaro Abe fought hard for a 10 percent increase in the ODA budget, arguing that it was critical to Japan's "peace diplomacy" program. In addition, Mr. Abe reasoned that the double-digit increase was necessary to the success of the Foreign Ministry's plan to double Japan's ODA outlays over seven years from its FY 1985 $2.4 billion level. The fact that Mr. Abe succeeded in garnering the highest percentage increase among major budget items is seen as bolstering his political position in the jockeying to succeed Mr. Nakasone.

Cabinet adoption of MOF's budget guidelines is the first step in the long budget process and an important indicator of the direction of fiscal policy. It is also a good gauge of the relative strengths of each cabinet minister vis-a-vis the powerful Finance Ministry. Each ministry must now prepare a detailed budget in accord with the guidelines for submission to MOF by the end of August. The final budget should be compiled by the end of the year.

Jon Choy

MOF Okays 7 Percent Ceiling For FY 86 Defense Spending Hike

As part of its overall ceiling for the fiscal 1986 budget, the Ministry of Finance (MOF) agreed to a maximum 7 percent hike for the Japan Defense Agency (JDA), bringing JDA's budget to Y3.36 trillion (about $14 billion at Y240=$1.00). This figure came shortly after the Japanese press reported that JDA sought an increase of 8 percent. The final ceiling was considerably higher -- by MOF standards -- than the 5.1 percent figure adopted by the ministry at the same point in last year's budget negotiatons, an indication that the tightfisted keepers of the government's yen may finally have been pulled into line with the Nakasone government's policy to shift scarce budget funds from domestic programs to defense and overseas development assistance.

For the last five years, JDA spending hikes have never fallen below 6.5 percent. In the last two years, however, increases have come only with the prime minister's personal intervention and the support of top defense proponents within the LDP. The fact that MOF went along with the 7 percent spending ceiling suggests that such intervention will not be necessary this year. It also bodes well for the first year of the new five-year defense estimate, which should be approved soon by the Nakasone government for implementation beginning April 1, 1986. Defense observers had suggested that the plan would be unable to meet its goals if the first year provided for less than a 6 to 7 percent spending hike.

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REPORT

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FOREIGN DIRECT INVESTMENT IN JAPAN: 1985 UPDATE

Summary

Foreign direct investment in Japan continued to swell in 1984 as a recovering domestic economy enhanced the financial environment. Although the number of inward investments skyrocketed, the total apparently declined. Japan's attitude toward foreign investment continues to improve; both national and local governments have established investment promotion offices aimed at domestic and foreign firms. In addition, Tokyo recently announced that it would reform the regulations governing foreign direct investment to make it even easier for companies interested in operating in Japan. Important psychological and cultural hurdles remain, however, making direct investment no guarantee of success in Japan's market.

Introduction

The Japanese government's receptivity to foreign direct investment exhibits a spotty record. Given the extreme demands on foreign currency and domestic resources immediately after World War II, restrictive foreign exchange and investment regulations to defend the value of the yen and prevent excessive repatriation of profits were understandable. Equally understandable was the slow pace of liberalization once Japan joined the Organization for Economic Cooperation and Development (OECD). Although OECD guidelines mandate a certain degree of openness in the foreign investment regulations of member countries, they do not include any rigid timetables or penalties for noncompliance. In light of the tight regulation of domestic financial institutions and the economy's rigid financial structure, the Ministry of Finance (MOF) felt justified in extending its stranglehold to foreign investors.

More important, however, were Tokyo's infant industry policies that protected selected industries from overwhelming foreign competition. Aided by the Finance Ministry, the Ministry of International Trade and Industry hoped to foster industrial development by closing some sectors to foreign investment, forcing foreign firms to form joint ventures with Japanese companies in other areas, or exchanging technology licenses for investment permission. It is important to remember, however, that these policies were not applied across the board. Foreign investment in many light manufacturing industries and food product lines was relatively open. The close scrutiny and labyrinthian procedures, however, were sufficient to chill many potential investors' interest in Japan.

Since 1980, when full compliance with OECD foreign investment guidelines was achieved, there has been a sharp change in Japanese attitudes toward foreign investment. Slower economic growth is one major reason for the change -- Japanese policymakers realized that they were denying the economy a source of economic stimulus. The growth of private domestic investment fell dramatically from the high levels of the 1960s and early 1970s, although it has partially recovered during the current economic upturn. Foreign investment, while no rival to domestic investment, can augment this important component of growth.

Public spending in rural areas has been one victim of Tokyo's efforts to control the central government budget deficit, creating another opening for foreign firms. In order to sustain growth in rural areas, central and local government officials have broadened the scope of promotional efforts to include foreign investors. Several of Japan's prefectures have mounted investment promotion missions to the United States and Europe -- an unheard-of activity as recently as five years ago.

On a broader scale, Prime Minister Yasuhiro Nakasone's administrative reform campaign is attacking what foreign observers have long listed as the main obstacle to investing in Japan: a highly intrusive central government. Deregulation of many areas of finance and industry should not only make it easier for domestic companies to grow but also improve the opportunities for foreign investors.

Investment Promotion

As for specific promotional programs, the central government offers a site-survey service that finds the best match between foreign investors' requirements, local infrastructure, and human and natural resources. The "Technopolis" rural development plan, "Teleopolis" integrated communications project and ocean resource exploitation programs have also attracted attention from abroad. Foreigners are welcome in Tokyo's dream of creating pockets of high technology industry throughout the country.

In an effort to ease the investment process by reducing the amount of paperwork required, MOF has announced simplified notification procedures for foreign investors. The package of changes to the Foreign Exchange and Foreign Trade Control Law, which took effect July 1, allows investment activity to

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begin immediately after papers are filed with MOF and any other relevant ministry -- eliminating the usual two-week waiting period. The changes apply to all industries except agriculture, forestry, fisheries, leather and leather goods, mining and oil, where foreign investments are still subject to case-by-case approval.

Japan's most recent "action program" of liberalizations also contains measures to encourage investment. In addition to continuing and strengthening information services, Tokyo will piggy-back a new Industrial Cooperation Information Service Desk onto the Japan External Trade Organization's (JETRO) special industrial cooperation project. The new desk, to be opened at JETRO offices in major cities around the world, will provide information and consulting tailored to individual company needs. The government will also increase the amount of low-interest Japan Development Bank loans available to foreign investors.

Private financial institutions are also becoming increasingly involved in promoting two-way investment flows. Sanwa Bank Ltd. signed an agreement August 8 with the State of Alabama institutionalizing the exchange of investment information. Alabama-based firms now have a excellent source of information and counsel in Japan's fifth-largest bank. This is the first agreement of its kind between a Japanese bank and a state government and both sides expect cross-investment to pick up. If it proves successful, other banks will undoubtedly follow suit.

Not all promotion efforts originate in Japan: nearly half of this country's state governments maintain representative offices there. Although primarily meant to attract Japanese investment to the United States, they also serve as a source of first-hand information to interested American companies. The largest U.S. business organization in Japan, the American Chamber of Commerce in Japan, also expends a great deal of effort promoting two-way direct foreign investment. European governments, too, provide information services to their nationals through representative offices in Japan, although again, their main function is to promote investment in the opposite direction.

The Record for 1984

All these efforts have had a mixed impact on investments flowing into Japan. Although detailed information has not yet been released, foreign direct investment in fiscal 1984 (April 1, 1984 to March 31, 1985) totaled 3,685 cases valued at $493 million according to preliminary Finance Ministry data. In fiscal 1983 by comparison, the tally came to 2,363 cases valued at $819 million. It is clear that there has been an impact on the number of investments rather than on their value. If one looks farther back this pattern holds true -- there were only 1,052 cases worth $749 million in fiscal 1982 and just 919 cases valued at $432 million in fiscal 1981.

It is important to note that the Finance Ministry figures that form the basis for this data are derived from the foreign investment notices filed with the ministry. Although the figures cover all sectors, including distribution, services and manufacturing, there are two major caveats to these statistics. First, there is no verification of the investment by MOF officials. Given the tortuous negotiations that precede an investment, it would not be surprising to find that many prospective deals ultimately fall through. Second, the notifications are submitted in Japanese and translated into English by the ministry. There has been no effort on the author's part to verify the names, value or current status of the investments as reported by MOF. Thus while the information can serve as a good indication of trends, it is imperative to keep these points in mind.

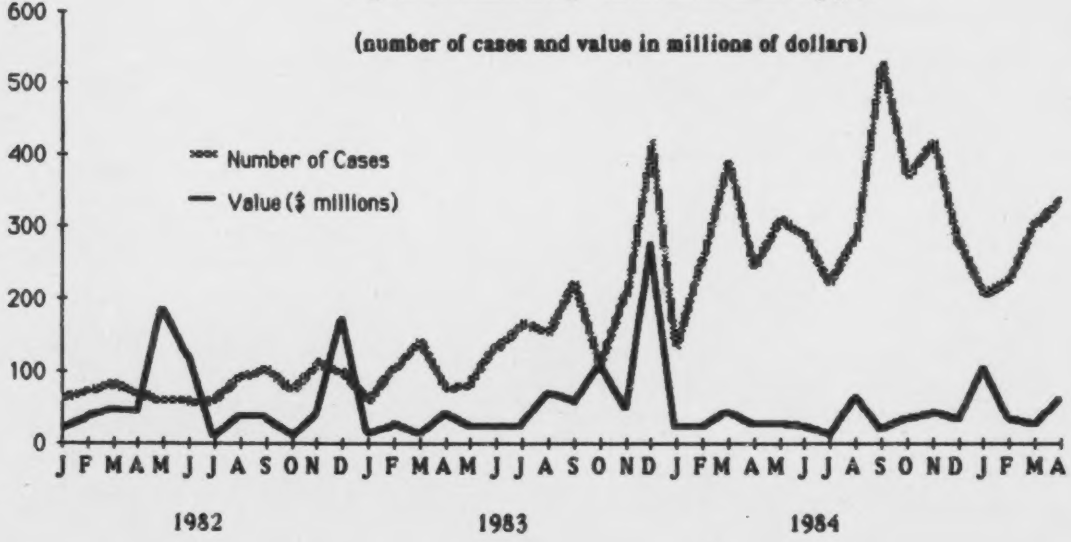
Furthermore, MOF's foreign investment classification guidelines differ from standard U.S. practice. MOF considers investments valued at less than 10 percent of a company's outstanding stock or led by investment brokers as direct investments rather than portfolio investments. In fact, MOF classifies investments over Y100,000 ($2,500) as "major" and does not even consider the percentage. Another important difference is that MOF does not include reinvestment by foreign subsidiaries; investments funded with retained earnings or with locally obtained financing can be quite significant. For these reasons, the Japanese data can present a confusing picture.

An overview of monthly data supports the conclusion that the average monthly value of foreign investments in Japan has held steady while the number of investment cases has risen dramatically (see Figure 1). Small investments clearly constitute the vast majority of cases, pushing down the average investment's value in the past three years from $712,000 in fiscal 1982 to $347,000 the next year and finally to $134,000 in FY 1984. U.S. Commerce Department data, although calculated on a different basis, also indicate that U.S. investment in Japan was flat last year.

The reasons for this are unclear. One possibility is that foreign firms are purchasing a small amount of stock as a sign of good will or sincerity while negotiations are in progress. In other cases, perhaps, large amounts of

Figure 1: Total Foreign Direct Investment In Japan

(number of cases and value in millions of dollars)



funds are not necessary. This is particularly true of the service and distribution (wholesale/retail) sectors where the majority of investments are made. There are also cases where individuals are trading their expertise for an equity stake in the venture. Furthermore, nearly all the Fortune 500 companies already have a Japanese subsidiary and see no need for a new venture, especially in light of the relatively high cost of raising funds in the United States. Since detailed data on all investments are unavailable, the mystery of the incredible shrinking investment remains unsolved.

An analysis of the information that is available is enlightening nonetheless. By country of origin, the United States retained its premier position in calendar year 1984, accounting for 32.6 percent of all investments by cases and 53.4 percent of the total value (see Tables 1 and 2). While still far behind the United States, European investors increased their share of the action in 1984. The shares of Asian countries, on the other hand, did not experience significant growth. Investment from Africa and the Middle East actually declined.

The mix of investor types points to new developments. Individual investors continued to be active in 1984, making slight gains in both cases and value. Investment houses sharply increased their share of cases, especially in the last months of 1984 when they accounted for as much as half of the total. There were a number of prominent investments in late 1984, as giants such as American Telephone & Telegraph Co., General Electric Co. and others took preparatory steps toward entering the soon-to-be deregulated domestic telecommunications market. In general, however, there was no rush into Japan's markets by large foreign corporations.

By type of investment, the establishment of new firms remains ahead in both numbers of cases and total value. One interesting point is that more foreign firms bought out their Japanese partners in 1984 compared with the previous year. This may present an unbalanced picture, however, because there are no statistics on how many foreigners liquidated or reduced their Japanese holdings. Hence, it is possible that these were more numerous and of greater value than the cases in which investors increased their shares.

The distribution of investment by sector and industry (Table 3) provides some interesting figures. Wholesale trade is clearly the most popular endeavor, followed by services (particularly business services) and manufacturing. No one particular product dominates the wholesale trade category, but financial and computer firms account for the majority of service sector investments. Investment in manufacturing seems evenly balanced between companies providing intermediate goods and those in high technology fields, particularly electronics.

Overview and Conclusion

Global money markets were in turmoil for much of 1984, as the vagaries of the U.S. dollar against other major currencies attested. In view of the unusually large differentials between U.S. interest rates and those obtainable in Japan (and elsewhere for that matter), it is not surprising that inward investment experienced little growth in value. This presents Japanese policymakers intent on promoting foreign investment with difficult choices: how much money are they willing to spend to attract investment from abroad, and who should they target?

Clearly it takes money, tax incentives and subsidized loans, for instance, to make money (increased investments). Under Tokyo's strict fiscal austerity program, however, there is little leeway for new incentives or loans. Although the number of investments from all sources has been rising, these have generated little recognition because the individual investment is small. Should Tokyo court a handfull of large companies in an effort to achieve a strong demonstration effect, or should officials continue a hands-off approach? The lack of consensus on these questions may limit the effectiveness of investment promotion programs.

An overview of investment trends by country of origin yields two points. First, the United States' share of investments is slowly shrinking, even though its absolute value continues to increase. This reflects the relative increase of investments by European and Asian countries rather than a decline of funds flowing from America. While this provides some encouragement to Japanese officials, it will be a long time before investments from other countries rival the amount of money coming from the United States. Second, it appears that the opportunity to attract petro-dollars from Middle Eastern countries has passed. Oil-producing states, once flush with investment dollars, experienced declining sales and prices in 1984. Coupled with continued high government spending, this downturn makes it unlikely that they will channel any significant amount of capital into Japan.

The predominance of investments in non-manufacturing enterprises has interesting implications. If the goal of Japanese officials is to maximize the employment and growth effects of foreign investment, then the service sector dominance is of some concern. Manufacturing operations demand inputs of raw and intermediate goods as well as labor, making a stronger impact on other parts of the economy than service companies, which generally require mostly labor input. On the other hand, the large number of new service and trading companies may help to increase imports into Japan, easing trade frictions. Of course, this requires that there be enough small companies to make a dent in the trade statistics, which could take several more years. Finally, the lack of manufacturing investment highlights the unwillingness or inability of foreign companies to make a serious commitment to the Japanese market.

An important exception, however, is the upward trend of high technology investments. Reflecting the caliber of Japanese expertise in this sector, an increasing number of foreign firms view participation in Japan's market as vital to their competitive strength. Here too, however, there is a lack of heavy investment by large firms, with the exception of some specialized-chip makers, semiconductor production equipment makers and pharmaceutical companies. Recent filings by U.S. high technology industries for protection from Japanese competition, however, underscore the difficulties of successfully penetrating that country's markets.

In conclusion, although most of the legal hurdles to foreign direct investment have been eliminated, firms abroad are still hesitant about sinking money into Japan. The problems they face stem in large part from cultural differences. Foreign firms have difficulty in attracting skilled labor and obtaining local financing because they lack an established reputation in Japan. The principal way to develop that reputation is to accept losses in the short run without stinting on quality, advertising and after-sales service -- a business plan that is rare among Western companies. Furthermore, even some established firms are having second thoughts. Local production has not yielded significant market-share gains for Texas Instruments Inc., even though its Japanese subsidiary is quite profitable. Breaking into markets where established buyer-supplier relationships exist is very difficult, even with local production facilities. Therefore, while foreign direct investment in Japan will continue to expand, growth is likely to be moderate.

For further information, contact Jon Choy.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Table 1: Major Direct Foreign Investments in Japan by Country and Category, 1983*

(in millions of yen; share of total in parentheses)

Investor	Total		New Firms		Existing Firms		Expanded Holdings	
	Value	Cases	Value	Cases	Value	Cases	Value	Cases
United States	Y89,870.5 (75.3%)	226 (35.4%)	Y55,393.1 (87.6%)	124 (38.6%)	Y4,752.5 (48.8%)	47 (25.4%)	Y29,725.0 (64.0%)	55 (41.4%)
Canada, Central & South America	5,482.0 (4.6)	59 (9.2)	3,734.6 (5.9)	17 (5.3)	642.4 (6.6)	29 (15.7)	1,105.0 (2.4)	13 (9.8)
United Kingdom	3,041.2 (2.5)	60 (9.4)	718.6 (1.1)	23 (7.2)	1,321.4 (13.6)	22 (11.9)	1,001.2 (2.2)	15 (11.3)
West Germany	2,240.9 (1.9)	39 (6.1)	585.0 (0.9)	20 (6.2)	108.9 (1.1)	7 (3.8)	1,547.0 (3.3)	12 (9.0)
France	484.2 (0.4)	26 (4.1)	295.4 (0.5)	14 (4.4)	56.5 (0.6)	7 (3.8)	132.4 (0.3)	5 (3.8)
Other Europe	8,764.4 (7.3)	68 (10.6)	1,074.0 (1.7)	38 (11.8)	204.8 (2.1)	19 (10.3)	7,485.6 (16.1)	11 (8.3)
Hong Kong	6,772.8 (5.7)	42 (6.6)	257.9 (0.4)	19 (5.9)	2,102.3 (21.6)	12 (6.5)	4,421.7 (9.5)	11 (8.3)
Taiwan	471.2 (0.4)	31 (4.9)	284.1 (0.4)	17 (5.3)	116.8 (1.2)	11 (5.9)	70.2 (0.2)	3 (2.3)
Korea	200.7 (0.2)	7 (1.1)	199.0 (0.3)	6 (1.9)	1.7 (**)	1 (0.5)	0	0
Southeast Asia	1,082.5 (0.9)	13 (2.0)	259.7 (0.4)	5 (1.6)	39.5 (0.4)	7 (3.8)	783.3 (1.7)	1 (0.8)
Other Asia	831.8 (0.7)	59 (9.2)	450.7 (0.7)	37 (11.5)	267.5 (2.7)	16 (8.6)	113.6 (0.2)	6 (4.5)
Africa	18.0 (**)	3 (0.5)	12.5 (**)	1 (0.3)	2.5 (**)	1 (0.5)	3.0 (**)	1 (0.8)
Middle East	275.5 (0.2)	6 (0.9)	0.0	0	124.7 (1.3)	6 (3.2)	0.0	0
Total	119,423.9	639	63,264.5	321	9,740.4	185	46,419.0	133
Of Which:								
Individuals	1,897.1 (1.6)	126 (19.7)	889.7 (1.4)	67 (20.9)	856.9 (8.8)	42 (22.7)	150.6 (0.3)	17 (12.8)
Subsidiaries	18,367.5 (15.4)	99 (15.5)	4,879.7 (7.7)	38 (11.8)	2,784.2 (28.6)	27 (14.6)	10,703.6 (23.1)	34 (25.6)

* Stock purchases with a value greater than Y100,000 only.
** Less than 0.1

Source: Ministry of Finance, International Finance Bureau, Foreign Capital Division.

Table 2: Major Direct Foreign Investments in Japan by Country and Category, 1984*

(in millions of yen; share of total in parentheses)

Investor	Total		New Firms		Existing Firms		Expanded Holdings	
	Value	Cases	Value	Cases	Value	Cases	Value	Cases
United States	Y65,011.0 (53.4%)	274 (32.6%)	Y46,981.8 (66.6%)	164 (41.3%)	Y3,714.3 (27.9%)	52 (22.1%)	Y14,314.94 (40.9%)	58 (27.9%)
Canada, Central & South America	6,452.4 (5.3)	65 (7.7)	4,373.7 (6.2)	23 (5.7)	1,021.1 (5.0)	30 (13.2)	1,057.6 (3.4)	12 (5.5)
United Kingdom	7,061.1 (5.8)	73 (8.7)	2,539.6 (3.6)	24 (6.1)	3,489.8 (17.2)	38 (16.7)	1,031.7 (3.3)	11 (5.1)
West Germany	6,939.4 (5.7)	62 (7.4)	1,904.7 (2.7)	31 (7.7)	3,738.7 (18.5)	14 (6.1)	1,296.0 (4.2)	17 (7.8)
France	3,774.0 (3.1)	45 (5.4)	1,975.2 (2.8)	21 (5.4)	547.0 (2.7)	11 (4.8)	1,251.8 (4.0)	13 (6.0)
Other Europe	13,635.3 (11.2)	103 (12.2)	4,021.0 (5.7)	46 (11.6)	4,289.1 (21.2)	32 (14.0)	5,325.2 (17.2)	25 (11.5)
Hong Kong	10,226.4 (8.4)	86 (10.2)	3,668.2 (5.2)	29 (7.3)	1,840.1 (9.1)	20 (8.82)	4,718.1 (15.2)	37 (17.1)
Taiwan	3,287.1 (2.7)	40 (4.8)	1,269.8 (1.8)	27 (6.7)	638.1 (3.2)	10 (4.4)	161.7 (0.5)	3 (1.4)
Korea	730.5 (0.6)	3 (0.4)	493.8 (0.7)	1 (1.0)	236.7 (1.2)	2 (0.9)	0.0	0
Southeast Asia	1,826.2 (1.5)	15 (1.8)	1,128.7 (1.6)	14 (3.4)	0.0	0	697.5 (2.3)	1 (0.5)
Other Asia	2,556.6 (2.1)	70 (1.3)	1,481.4 (2.1)	15 (3.7)	533.6 (2.6)	15 (6.6)	541.6 (1.7)	40 (18.4)
Africa	7.2 (**)	2 (0.2)	3.1 (**)	1 (0.1)	4.1 (**)	1 (0.4)	0.0	0
Middle East	186.3 (0.2)	3 (0.4)	0.0	0	186.3 (0.9)	3 (1.3)	0.0	0
Total	121,743.4	841	70,543.2	396	20,238.9	228	30,961.3	217
Of Which:								
Individuals	3,731.6 (3.1)	183 (21.8)	1,723.6 (2.4)	73 (18.3)	1,037.4 (6.4)	63 (26.8)	970.6 (0.1)	47 (22.6)
Subsidiaries	24,213.8 (19.9)	124 (14.7)	8,731.5 (12.4)	48 (12.1)	4,576.2 (28.2)	23 (9.8)	10,906.1 (31.2)	53 (25.5)

* Stock purchases with a value greater than Y100,000 only.
** Less than 0.1

Source: Ministry of Finance, International Finance Bureau, Foreign Capital Division.

Table 3: Major Direct Foreign Investments in Japan by Industry, 1984

(in millions of yen and number of cases)

Industry	Value	Cases	Industry	Value	Cases
Agriculture	Y731.8	2	Wholesale, Retail Trade	Y53,567.1	347
			Wholesale Trade	38,193.7	327
Mining	2,177.5	6	Durable Goods	22,471.5	238
			Nondurable Goods	15,722.2	89
Construction	0	0	Retail Trade	15,373.4	20
Manufacturing	26,783.5	210	Finance, Insurance, Real Estate	6,087.2	82
Food Products	134.7	4	Finance	3,876.9	67
Tobacco Manufactures	0	0	Insurance	1,238.9	4
Textile Mill Products	0	0	Real Estate	971.4	11
Apparel, Made-up Textile Products	0	0			
Lumber and Wood Products	0	0	Services	18,826.6	149
Furniture and Fixtures	73.2	2	Business Services	12,201.3	88
Paper and Paper Products	41.3	1	Other Services	6,625.3	61
Printing and Publishing	0	0			
Chemicals and Related Products	1,138.1	8	Nonclassifiable Establishments	2,612.8	18
Petroleum Refining	773.1	4			
Rubber and Plastic Products	387.4	2	Total	121,743.4	841
Leather and Leather Products	0	0			
Stone, Clay, Glass and Concrete	82.1	4			
Primary Metals	83.5	2			
Fabricated Metal Products	4,511.7	24			
Nonelectric Machinery	7,087.1	37			
Electric Machinery, Electronics	8,271.3	83			
Transportation Equipment	0	0			
Precision, Medical, Photographic	1,382.7	17			
Miscellaneous Manufactures	2,817.3	12			
Transportation, Communications	10,956.9	27			
Transportation	1,723.7	6			
Communications	9,233.2	21			

Source: Ministry of Finance, International Finance Bureau, Foreign Capital Division.

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COSTS AND BENEFITS OF PROTECTION
A STUDY BY THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT*

Summary

Concern about mounting pressures on the open multilateral trading system led the 1982 ministerial meeting of the Organization for Economic Cooperation and Development's (OECD) Council to ask the group's secretary general to carry out a study on the costs and benefits of trade and trade-related measures. The major results of this study are summarized in the following article. With demands for restrictions on imports proliferating in the United States, these findings deserve particularly careful review by legislators and policymakers.

Introduction

Over the last thirty years or more, the international exchange of goods and services has been a dynamic source of economic growth and structural flexibility. Throughout this period, the open multilateral system of trade and finance has adapted well to significant shifts in global patterns of competitiveness and the emergence of important new actors on the international scene. However, with the advent of prolonged slow growth in the late 1970s, the pressures for protection increased, in particular for so-called grey-zone measures. Despite the recovery, these pressures still persist in most of the OECD area, fueled by continued high unemployment, insufficient competitiveness of specific sectors and, in some countries, by currency appreciation.

*Reprinted from the OECD Observer, May 1985.

These problems, which have domestic and international origins, cannot be remedied by protective trade actions. Protectionist measures yield few benefits and impose substantial costs, chiefly on the protecting country but also on its trading partners. Not only have trade-restrictive measures proven to be an inefficient means of sustaining employment, they usually also delay much needed structural adjustment, making it more difficult to maintain non-inflationary growth and to create new viable jobs. Uncertainty about the future of trade regimes depresses business confidence. By implication, it has adverse effects on the efficiency of markets and the readiness of enterprises to expand and innovate, thereby affecting areas far beyond the initial government intervention. Trade protection has complex and pervasive effects throughout the economy. Consequently, the outcome of such policies frequently differs from the original intentions and objectives.

How Trade Barriers Have Spread

The OECD countries' commitment to the open multilateral system has ensured that by far the largest portion of manufactured trade encounters lower tariff obstacles today than at any time in the past. Subsequent to full implementation of the reductions agreed to in the Tokyo Round, average most-favored nation tariffs on industrial imports for the 17 major countries will be at around 4.5 percent. The results of the Tokyo Round also embody moves towards liberalization of some major non-tariff barriers. However, a relatively small, but recently increasing, number of sectors -- accounting for more than a quarter of manufactured trade -- are still subject to high nominal and effective tariffs (see chart), to severe non-tariff barriers and to distorting subsidization. Though the sectors traditionally most affected by such measures include textiles, clothing, footwear, steel and shipbuilding, protection has more recently been extended to previously less affected or unaffected sectors such as automobiles, consumer electronics and machine tools.

The lack of transparency of many of the trade barriers recently put in place makes it difficult to assess their extent or coverage, and any such assessment must be treated cautiously. On one plausible estimate, the share of restricted products in total manufactured imports increased over the period 1980 to 1983 from 6 percent to 13 percent for the United States and from 11 to 15 percent for the EEC [European Economic Community]. In 1983, the product groups subject to restriction accounted for around 30 percent of total consumption of manufactured goods in the countries covered, up from 20 percent in 1980. These results are drawn from a report which adopts a relatively narrow definition of non-tariff barriers; the increases in non-tariff protection are even more dramatic in some of the other research reviewed.

Within the protected sectors, the scope of protection has both deepened and widened. Taking steel, automobiles, motorcycles, consumer electronic products, textiles and footwear together, it has been estimated that the absolute number of non-tariff barriers quadrupled between 1968 and 1983. While less than one percent of OECD automobile trade (excluding trade within the EEC) was affected by discriminatory restrictions in 1973, this share had risen to nearly 50 percent a decade later. Other estimates suggest that the proportion

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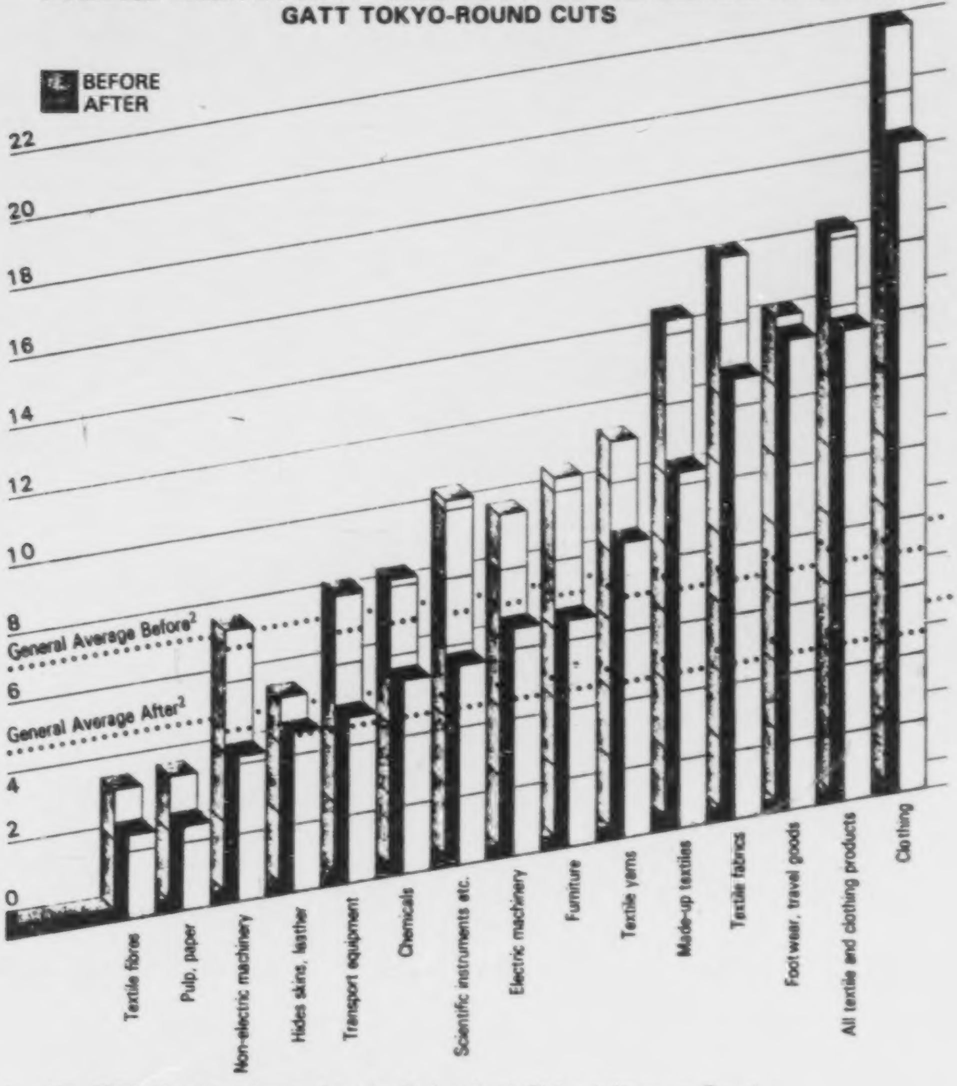
AVERAGE TARIFFS FOR 17[1] OECD COUNTRIES BEFORE AND AFTER THE GATT TOKYO-ROUND CUTS



1. US, EEC9, Canada, Japan, Austria, Switzerland, Finland, Norway, Sweden.

2. All industrial products except petroleum.

Note: Tariff averages are weighted according to total imports of the 17 countries.

Source: GATT and OECD estimates.

of trade under non-liberal treatment rose in recent years from 31 to 73 percent in steel and from 53 to 61 percent in the textiles and clothing group.

Changes in the mix of policy instruments used to control imports have increased the extent of discrimination. There has been a marked shift away from GATT [General Agreement on Tariffs and Trade] Article XIX safeguards, applied on a non-discriminatory basis, towards bilateral instruments such as voluntary exports restraints (VERs) and orderly markets arrangements (OMAs). From 1980 to 1983, the share of Japan's and the Asian NICs' [newly industrializing countries] exports affected by discriminatory restrictions rose from 15 percent to over 30 percent (see Table 1). At the same time, the range of supplying countries subject to such restrictions has also expanded. Moreover, measures adopted to prevent transshipment very often impose heavy documentation requirements and, subsequently, additional costs on products from unrestricted sources. As a result, the spread of discrimination can undermine the free flow of goods, even between those countries which -- at least in theory -- are not subject to restrictions.

Table 1: Value of Manufactured Exports to OECD Countries Subject to Trade Restrictions

(in billions of dollars)

		Subject to Restrictions[1]	
Country of Origin	Total Manufactured Exports 1980	In 1980	In 1983
Japan	$61.7	$ 7.0	$21.8
Korea	10.1	2.3	3.2
Taiwan	12.0	2.0	2.2
Hong Kong	11.8	3.4	4.2
Singapore	3.6	0.2	0.3
Total	99.2	14.9 (= 15%)	31.7 (= 32%)[2]

[1] Product items subject to restrictions are:

Japan - 1980: steel; television receivers to U.S.; ships.
1983: steel; one-third of television receivers to EEC; ships; automobiles; motorcycles to U.S.
Korea - 1980: one-half clothing and textiles; one-third footwear; television receivers to U.S.
1983: two-thirds clothing and textiles; one-half of footwear to EEC; one-half steel.
Taiwan - 1980: same as for Korea.
1983: same as for Korea.
Hong Kong - 1980: two-thirds clothing and textiles.
1983: four-fifths clothing and textiles.
Singapore - 1980: one-third clothing and textiles.
1983: two-thirds clothing and textiles.

[2] To correct for the impact of restrictions on the composition of trade, this figure has been calculated using 1980 weights.

Protectionist Measures Distort Trade Flows

It is frequently argued that the protectionist backlash has had a limited impact since trade in manufactures, even in the product groups most subject to restrictions, continued to grow rapidly in the 1970s. Equally, the countries to whose exports most of the discriminatory measures apply, managed to increase their share of OECD imports. However, the trade performance of the more restricted product categories deteriorated markedly in the 1980s. It would seem that -- after being largely ineffective in the 1970s (with the possible exception of the Multi-Fiber Agreement (MFA) -- protectionist measures were gradually reinforced and eventually began to bite.

In the 1970s, the impact of discriminatory restrictions on trade flows was limited by pervasive trade diversion, as imports from the more restricted sources were replaced by imports from other suppliers. Trade diversion has been greatest in industries where there is a multiplicity of potential sources of supply and where trade is highly responsive to price and quantity signals -- clothing and footwear, for instance. However, growing diffusion of technological and industrial capabilities, improvements in worldwide marketing and distribution channels and the great sensitivity of multinational enterprises to opportunities for shifting the site of production have also generated trade diversion in less mobile activities such as steel and consumer electronics. The 1977 Orderly Market Agreement for color television receivers between the United States and Japan is a good illustration. Though, at the time of the agreement, Japan accounted for 90 percent of U.S. imports of complete receivers, its share two years later was down to 50 percent, while that of the Asian NICs had increased from 15 to 50 percent.

In addition to changing the geographical origin of imports, quantitative restrictions have affected the nature of the products traded. In particular, faced with a volume limit on their exports, the more restricted suppliers have been encouraged to move up-market within the controlled group, thus maximizing the value of a fixed total volume of exports. According to one estimate, the share of luxury cars in Japanese automobile exports to the United States increased by 13 percentage points as a result of voluntary export restraint. There is also considerable evidence of such shifts in product composition occurring in the other industries reviewed.

All these protection-induced changes in the country and product composition of trade have tended to undermine the objectives of import control. Governments have therefore come under continuous pressure from domestic producers to extend the number of countries subject to the restrictions and to specify more precisely the product categories in which the restricted producers can operate. Thus, during the first Multi-Fiber Agreement (1974-77), the United States had bilateral agreements with 19 countries, but none of these agreements specified explicit limits on imports of so-called "sensitive items." During the second agreement (1978-81), specific limits on these items were introduced into U.S. bilateral agreements with seven countries; and during the third agreement (1982-86), this number rose to 14. Equally, for the EEC, the number of countries covered by bilateral agreements increased from 33 in MFA I to 43 in MFA III, while the number of categories specified went from 23 to 48, much of the rise actually occurring in MFA II.

Trade Restrictions Drive Prices Up

Discriminatory quantitative restrictions have created upward pressure on prices in protected markets: first, because the most restricted sources tend to be those with the lowest costs; and second, because these restricted sources raise their export prices to increase profits by capturing the economic rents from the restrictions. Particularly in industries where demand is -- at least in the short term -- fairly inelastic, these increases in import prices provide an important "price umbrella" for domestic producers. As restrictions have tightened and the scope for offsetting effects diminished, the upward pressure on prices may have strengthened.

A study of the United Kingdom clothing industry suggests that the average increase in U.K. clothing retail prices due to the second MFA was on the order of 20 percent and for lower quality items such as jeans 30 to 50 percent. Prices for children's wear -- a highly labor-intensive product -- doubled. These changes can have a regressive impact on income distribution, because clothing accounts for a larger share of poorer households' consumption expenditure. One estimate finds that protecting the Canadian clothing industry costs lower-income households four times as much as it costs higher-income households.

A recent report by the U.S. International Trade Commission illustrates the impact of voluntary export restraint on U.S. car prices. It estimates that in 1984 Japanese cars were sold in the United States for $1,300 more, on average, than they would have in the absence of the VER. The respective increases for 1981, 1982 and 1983 were on the order of $185, $359 and $831 per car. Thus, in a period of buoyant demand, U.S. consumers paid increasingly higher prices as a result of the shortfall in supply. During the same period, increases in the prices of domestically produced cars ranged from approximately $78 in 1981 to almost $660 in 1984, much of this increase apparently due to the VERs. Furthermore, the reduced availability and the prevailing higher prices of new Japanese cars led increasing numbers of consumers to turn to the used car market and thereby put upward pressure on the prices of used domestic and Japanese cars.

Protection, notably by voluntary export restraint, also provides large transfers to foreign producers. It is estimated that protection has increased the profit margin on Japanese steel sales to the U.S. market by at least 10 percent. This is around $200 million a year -- about equivalent to half of Japan's annual expenditure (the world's highest) on steel R and D. As regards textiles and clothing, the United Kingdom's restrictions under the MFA are estimated to transfer twice as much income to foreign exporters as to U.K. producers. A plausible overall assessment is that the annual transfer from OECD consumers to Asian NIC exporters of textile and clothing products is at least $2 billion. This is equivalent to around 4 percent of the total value of NIC exports to the OECD region.

Import Restrictions: An Inefficient Means of Sustaining Employment

With prolonged slow growth and high unemployment in the late 1970s, governments have come under increasing pressure to attenuate the speed of structural adjustment and the rate of job losses. However, import restrictions appear to have only a limited positive impact on employment in the protected sectors. First, even in the sectors most exposed to international competition, trade flows are usually a fairly minor determinant of employment levels; second, because of trade diversion, discriminatory restrictions have a relatively limited impact on overall import volumes; third, the scope for substituting domestic output for imports may be limited. Thus, the proportion of domestic employment potentially protected by import restrictions is normally very small compared to the changes induced by shifting macroeconomic circumstances. On one estimate, the U.S.-Japan automobile VER increased U.S. employment by no more than 22,000 over the period April 1981 to end 1982, while the recession was cutting labor input in the auto industry by more than ten times this figure.

Protection is most likely to be effective in maintaining employment in the few industries which have structurally low productivity, little scope for modernization and hence compete mainly with developing countries: for example the clothing industry. It was estimated in 1980 that Canadian restrictions on apparel imports protected 7.5 percent of the industry's jobs. Another study found that 1977 U.S. tariffs on apparel preserved nearly 90,000 jobs, equivalent to 10 percent of the industry's employment. Finally, a 50 percent increase in allowable MFA imports of apparel under Swedish VERs would, it was concluded, reduce clothing employment by 6 percent, twice as large a job loss as a similar increase in textile imports would entail. In most other industries, the employment effect due to protectionist measures is typically on the order of two or three percentage points, though in the very short term the impact may be larger.

Over a longer period, protection can accelerate the substitution of capital for labor and thereby reduce industrial employment. This capital deepening, together with relatively slow demand growth, accounts for two-thirds or more of the long-run decline in employment in the textile industry in advanced OECD countries, with changes in import penetration being a rather minor factor. A recent U.K. study estimates that, given the slow growth of demand, productivity growth in that country's textile industry will reduce employment by nearly 40 percent over the period 1983-97. Abolishing the MFA would, over the same period, involve a fall in employment of only 7 percent, equivalent to 13,000 jobs. "Saving" each of these jobs costs U.K. consumers about twice as much annually as the yearly wage of a textile worker.

Productivity was also increasing (partly as a result of accelerated offshore assembly) when employment in the U.S. color television industry declined -- despite protection -- from 29,000 in 1977 to 26,000 in 1979 and 21,000 in 1981. It is estimated, however, that job losses between 1979 and 1981 would have been 1,000 to 1,500 greater, had import restrictions not been in effect. On the conservative assumption that the price of a $200 set increased by only $5, saving each of these jobs cost U.S. consumers over $60,000 a year.

Finally, job maintenance in the protected industry may be offset by adverse macroeconomic effects. Protection-induced changes in price and wage behavior can compromise the effectiveness of macroeconomic policy and necessitate a tighter stance for monetary and fiscal policies. Protection extensive enough to have a major impact on imports and employment in a wide range of industries is likely to lead to currency appreciation which would, in turn, reduce total exports, thus curtailing employment in other sectors of the economy. Since the jobs being protected typically have lower skill requirements, they make fewer demands on a country's capacity to develop and diffuse new technologies and hence impede its ability to export. For Canada and Australia, econometric studies have found that persistent and widespread protection of manufacturing industry has imposed a "hidden tax" on the more export-oriented activities. The small number of lower-pay, lower-quality jobs saved by protection are replacing other jobs which, over the longer term, would contribute more to overall productivity and higher real incomes.

Protection Can Delay Much-Needed Adjustment

By raising prices and increasing the domestic producers' share in the home market, import restrictions can increase the resources available for industrial adjustment. The improved cash flow of the domestic firms affected makes it possible for them to invest in modernization of plant and equipment, to underwrite the costs involved in adjusting capacity to demand, to pay exit costs from no longer viable market segments, and/or to diversify into more promising areas of activity. Moreover, protection can encourage foreign producers to engage in joint ventures with domestic firms. But at the same time, protection normally reduces competitive pressures and, given the substantial costs adjustment entails, can perpetuate technical and economic inefficiency.

In fragmented, labor-intensive industries, such as clothing and footwear, there is limited scope for profit-enhancing product differentiation or substitution of capital for labor. As a result, protection does little to establish durable market segmentation or to reduce the cost differential between OECD producers and major developing country exporters. In the clothing industry, for example, advanced technology is being introduced into ancillary operations such as cutting and grading, but stitching operations, which account for 80 percent of value added, are -- and in the medium term will remain -- highly labor intensive. At this stage of production, cost differentials between developed countries and the leading developing country exporters are on the order of 5 or 6 to 1. But even under such circumstances, the argument that protectionist measures only facilitate a run-down in these activities is clearly contrary to the evidence. In effect, because entry barriers are low, whatever economic rents are created by protection simply attract new resources, not only labor and capital, but also entrepreneurship.

In oligopolistic industries, competition depends chiefly on product differentiation, economies of scale, technology, marketing and service. Under such conditions the scope for regaining competitive advantage may be greater. Indeed, several cases come to mind in which protection, coupled with adjustment programs, has encouraged firms to use the resources made available for restructuring. Prominent examples are the car industry in the United States and certain parts of the steel industry in the European Community. Frequently, however, factors are at work which impede adjustment. If price and quantity signals from the marketplace are distorted, import controls can make it difficult for firms to assess their long-term costs and set investment plans accordingly. If there is widespread excess capacity -- and modernization investments would involve construction of large-scale new plant as in the case, for example, in the steel industry -- the risk of reinvesting in the activity may outweigh the potential benefits. Firms may also face political or institutional constraints on their restructuring choices if conditions are attached, e.g. if assistance is granted to firms, providing they maintain employment.

In the longer term, changing industry behavior in oligopolistic sectors can reduce the extent to which domestic producers benefit from protection-created rents and can narrow their adjustment options. If there is widespread excess capacity, and if major differences exist between firms' cost levels and strategic objectives, collusion on prices and output may be difficult to maintain, so that competition among existing domestic firms may erode profit margins. Furthermore, even in activities with substantial entry barriers, persistent rents from protection may encourage new entrants, including foreign companies in restricted countries which seek to appropriate a greater share of the rents by investing in the protected market. While new competition alters the industry's pricing behavior, the response of foreign rivals to protection also narrows product and marketing options. As competitors in restricted countries upgrade products and move up-market, the higher-cost domestic firms face increased foreign competition in those sections of the market which are least price-elastic. Yet this is precisely where their long-run competitive edge may otherwise lie.

Protection Hurts Developing Countries

On the whole, variations in economic growth rates in the industrialized countries have had more impact on export growth in the developing countries than OECD protection has had (see Table 2). However, the spread of trade

Table 2: Total OECD Imports from Five Major East Asian NICs, 1979-84

(in billions of dollars)

	1979	1980	1981	1982	1983	1984[1]
Singapore	$ 5.1	$ 7.0	$ 6.6	$ 6.6	$ 6.9	$ 8.6
Korea	10.8	11.1	12.5	12.7	14.6	18.1
Taiwan	11.9	13.8	15.2	15.6	18.4	23.7
Hong Kong	10.2	12.3	12.6	12.2	13.3	15.5
Malaysia	8.3	9.2	7.7	7.2	7.7	10.1
Total	46.2	53.4	54.6	54.2	60.8	76.0
of which imported by United States	17.6	20.4	23.0	24.1	29.7	39.8
(average rate of change in real terms[2])						
Total	---	6.3%	2.2%	11.6%	17.5%	29.4%
United States	---	6.4	14.0	14.3	28.8	42.1

[1] For 1984, based on data for the first three quarters.

[2] Volume of imports: values deflated by the export price index of manufactures.

restrictions has changed the pattern and composition of these exports. Developing countries, and particularly the more advanced NICs, have rapidly stepped up the diversification of their exports, moving into new markets and more skill-intensive products. At the same time, there has been a deliberate shift of some production away from the countries most severely restrained by the protectionist policies of industrial countries into countries that are less restricted by also have low-cost labor. Protection has compounded the impact of changing cost configurations in prompting and accelerating these developments.

Hence some developing countries have captured market shares left by the more restricted exporting countries, benefiting in some cses from the shift of production facilities out of NICs. Attempts to circumvent quotas under Multi-Fiber Agreements and to benefit from the tariff preferences given developing countries by the Generalized System of Preferences have been important in this regard. Nonetheless, as restrictions tighten, second and third-generation manufacturing exporters seem more likely to run into difficulty than the more flexible NICs. Obstacles may include resistance from established exporters, anxious to preserve their market shares, and a network of trade restrictions which take effect quickly as exports expand fast from a low base.

Protecting countries have already shown their willingness to extend existing restrictions to new sources of supply, and this response may discourage investment in potential developing-country exporters. A striking instance is provided by the U.S. Orderly Marketing Agreement on color television receivers. Initially aimed at Japan, the agreement was extended to Korea and Taiwan when they emerged as alternative sources of supply. Though a number of other sources -- Mexico, Singapore and Thailand for instance -- were well placed to enter the United States market at that time, the deterrent effect of the initial extension of barriers was clearly sufficient to dissuade them.

Protection could also be relevant to the international debt problem (see Table 3). Debt-service ratios for developing countries fluctuated around 15-16 percent of exports during the 1970s and rose sharply to around 24 percent in 1982/83. But the recession, the dollar appreciation and the rise in interest rates which followed the second oil shock played a larger part in this increase than did OECD protection. Indeed, the rapid upsurge in developing country exports after 1982 has greatly contributed to avoiding any major debt crisis.

The importance of open multilateral trade with developing countries however goes far beyond the international debt issue. It has been estimated that a gradual increase in protection in the OECD region equivalent to a 15 percentage point rise in tariffs would cause a significant reduction of GDP [gross domestic product] in both developing and developed countries by 1995: the middle income oil-importing LDCs [less developed countries] would sustain a loss in GDP of about 3 1/2 percent, but the industrial countries would suffer a nearly equal loss as a result of the self-inflicted effects of their own protective measures.

Protection: A Blunt Instrument of Policy

Protectionist measures are usually intended to meet two broad objectives: to provide visible and immediate relief to industries experiencing

Table 3: OECD Imports from Major LDC Debtors Subject to Non-Tariff Barriers, 1982

(in billions of dollars)

	Brazil	Mexico	Argentina	Chile	Korea	Indonesia	Philippines	Yugoslavia	Total
Manufactured Imports Affected[1]	$1.8	$0.4	$0.2	$0.01	$6.8	$0.2	$0.6	$0.8	$10.8
Percent of Total OECD Manufactured Imports from That Country	42.9%	8.2%	22.2%	14.3%	58.1%	40.0%	30.0%	34.8%	40.6%
Agricultural Imports Affected[2]	$3.2	$1.4	$2.0	$0.6	$0.9	$0.6	$1.4	$0.3	$10.4
Percent of Total OECD Agricultural Imports from That Country	51.6%	73.7%	100.0%	95.0%	98.0%	54.5%	93.3%	68.2%	74.8%
Manufactured and Agricultural Imports Affected by Non-Tariff Barriers As Percent of Total OECD Imports from That Country	35.7%	8.0%	55.0%	21.0%	58.3%	4.3%	41.7%	31.4%	25.3%

[1] Textiles and clothing; iron and steel; footwear; consumer electronics.

[2] Meat; cereals; sugar; fish; vegetables and fruit; animal feeds; tobacco; vegetable oils.

severe difficulties, and notably to their workforce, while allowing ongoing adjustment to changed circumstances. These objectives correspond to a concern for employment and social equity on the one hand and to the goal of promoting greater economic efficiency and industrial restructuring on the other. Compared to the complexity of the objectives, protection is a fairly simple and blunt instrument of policy.

By reducing imports, protection seeks to raise the market share of domestic producers and the price they would receive for their goods in the absence of such measures. Raising output and profitability in the domestic industry is in turn presumed to increase employment and promote modernization. The indirect nature of this link between the instrument -- import controls -- and the policy variables targeted -- jobs and investment -- is the first reason for protection's ineffectiveness. There are others: trade diversion reduces the impact of discriminatory restrictions on the volume of imports; domestic producers may not be able to provide an attractive substitute for imports; if the pressure of either competition or excess capacity on the home market is strong enough, an increase in domestic output may involve little increase in employment, producers' profits or capacity to finance investment.

Even when protection does effectively transfer resources to the protected industry, the outcome may still fall far short of the policy goals. First, the two objectives of import controls -- modernization and job preservation -- are frequently incompatible, at least in the short run. More rapid modernization usually involves shutting obsolete plants and reducing the industry's labor force. Preserving jobs may mean keeping these plants, often the industry's most labor-intensive ones, in operation. Thus protection may help achieve one objective or the other; in none of the cases surveyed did it achieve both. Second, shifts in the regional and occupational composition of the protected industry make it difficult to ensure that whatever jobs are "saved" go to the workers who have the greatest difficulty in adjusting -- the less mobile, low-skilled workers in declining regions.

Ultimately, the ineffectiveness of protection has a pervasive impact on its costs. If protectionist measures fail to meet the underlying policy objectives, pressures may be created for yet more assistance to the industry in question. Furthermore, the "demonstration effect" of protection encourages more and more interest groups to become organized and divert adjustment policies from promoting overall economic efficiency to arbitrating among competing sectoral claims. Thus, to the direct cost of protection must be added those which are less tangible and more difficult to quantify. Even in economies operating at far from full employment, it may be possible to ignore the political and macroeconomic impact of a single protectionist measure but not the cumulative effect of the spread and persistence of such measures.

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USTR Talks Tough In Tokyo

U.S. Trade Representative Clayton Yeutter's first trip to Japan has produced several new developments in the administration's attempts to resolve U.S.-Japan trade frictions. In straightforward sessions with Japanese leaders, Mr. Yeutter described an administration determined to combat unfair trade practices and a Congress on the rampage against all U.S. trading partners, but

Most news accounts postulate that trade tactics will be decided by White House Chief of Staff Donald T. Regan, who has a reputation as a free trader but is said to be sensitive to the administration's relations with Hill Republicans. Some of the strongest calls for retaliation against Japan and other trade partners are coming from the GOP. Partisan struggles over control of the issue are almost as colorful as the White House-Capitol Hill battle. Punitive action against shoe exporters could mean triumph over the Democrats on a potential campaign issue, as well as the re-establishment of party discipline.

Overall, the administration's smoke signals to Congress have increased in number in recent weeks. Along with leaks about the footwear case, there are reports of an "action program" in the fall that will include liberal use of presidential veto powers on a variety of legislative initiatives, including trade. Similarly, USTR Yeutter's straight talk during his trip to Tokyo, although principally aimed at Japanese officials, was meant to portray a newly aggressive administration as well (see article in this issue.)

Part of that aggressiveness may stem from previous criticisms that the administration has lost interest or control over trade policy formation. It may also be seen as an indication of individual trade policy styles and/or an example of continued "get tough" tactics aimed at Japan and other U.S. trading partners. It is still too early to predict precisely the direction the administration's trade policy review will take. Trade watchers in Washington are, literally, waiting for the other shoe to drop.

Sheri Hoptman

Rising Trade Deficit Exerting Less Drag On U.S. Growth

Reagan administration economic forecasters have come under fire from their private-sector colleagues for being too bullish about overall U.S. growth prospects in 1985, but no one can fault them for glossing over the likelihood of another big jump in this country's already yawning merchandise trade deficit. At the start of the year, government trade analysts predicted that the imbalance would be $25 to $30 billion above 1984's $123.3 billion red-ink entry (imports valued c.i.f.). Although this is one projection the White House would be happy to see proved wrong, forecasters have so far been on target.

At $69.3 billion through June ($61 billion using Customs value imports), the U.S. trade deficit was already $10.5 billion ($9.7 billion) bigger than in the first half of 1984. Exports were up for the six months but only by 1.6 percent to $110.5 billion. More ominously, overseas sales slipped 1.1 percent in the second quarter after expanding 4.4 percent during the January-March period, pulled down by a drop in shipments of industrial supplies and food and feed commodities to Japan. At the same time, though, imports expanded at a much more moderate rate than last year, rising 7.3 percent to $179.7 billion (7.1 percent to $171.5 billion on a Customs basis) in 1985's first half. There was some pickup in the growth of purchases from abroad during the April-June quarter -- paradoxically, from countries other than Japan, but not enough to force analysts to revise their projections of modest import gains this year.

U.S. Exports to Japan

(in millions of dollars, f.a.s. value basis)

	January-June 1984	January-June 1985	Percent Change
Total Exports	$11,584.7	$11,550.1	-0.3%
Industrial Supplies	4,478.3	4,449.5	-0.6
Bituminous Coal	500.1	418.7	-16.3
Petroleum Products	291.9	392.8	34.6
Natural Gas	124.0	115.0	-7.3
Nuclear Fuels	83.4	55.9	-33.0
Logs and Lumber	451.9	430.8	-4.7
Paper Base Stocks	266.7	242.8	-9.0
Paper and Paper Products	154.5	140.5	-9.1
Organic Chemicals	360.4	354.3	-1.7
Inorganic Chemicals	298.0	401.8	34.8
Plastics and Synthetic Resin Compounds	178.6	156.7	-12.3
Fertilizers and Insecticides	139.5	146.8	5.2
Steel Scrap	136.5	97.2	-28.8
Nonferrous Ores and Scrap	180.1	227.7	26.4
Nonferrous Metals	217.0	167.2	-22.9
Textiles	55.7	61.3	10.1
Raw Cotton	358.6	269.3	-24.9
Hides and Skins	166.2	136.4	-17.9
Leaf Tobacco	40.0	83.4	108.5
Capital Goods	2,774.4	3,223.0	16.2
Nonelectric Machinery	1,671.2	1,828.8	9.4
Data Processing Equipment	519.2	731.3	40.9
Measuring, Testing and Control Instruments	214.1	244.8	14.3
Laboratory Testing and Control Instruments	45.3	57.4	26.7
Scientific, Professional and Medical Equipment	125.3	138.3	10.4
Power Generating Equipment (excl. aircraft and automotive engines)	214.6	40.5	-81.1
Metalworking Equipment	47.0	56.3	19.8
Service Industry Equipment	54.5	61.1	12.1
Electric Machinery	439.5	433.9	-1.3
Generators and Transformers	55.3	37.5	-32.2
Broadcast and Communications Equipment	220.4	179.0	-18.8
Telephonic and Other Electric Equipment	163.9	217.5	32.7
Transportation Equipment	663.7	960.3	44.7
Civilian Aircraft	255.4	542.0	112.2
Civilian Aircraft Engines and Parts	239.5	276.7	15.5
Automotive Parts	87.9	98.1	11.6
Food and Feed	2,982.3	2,306.6	-22.7
Corn	1,107.7	686.0	-38.1
Sorghum	109.9	105.4	-4.1
Soybeans	639.7	466.1	-27.1
Wheat	243.1	226.8	-6.7

Fruits and Vegetables	245.3	244.4	-0.4
Meat and Meat Products	301.1	255.6	-15.1
Fish and Fish Products	136.9	145.3	6.1
Consumer Goods	721.8	737.8	2.2
Pharmaceuticals	270.5	310.4	14.8
Toys and Sporting Goods	48.6	43.4	-10.7
Cigarettes	49.0	40.3	-17.8

U.S. Imports from Japan

(in millions of dollars, Customs value basis)

	January-June 1984	January-June 1985	Percent Change
Total Imports	$27,037.5	$33,967.8	25.6%
Automotive Products	9,019.4	11,743.6	30.2
Cars	6,017.9	7,488.3	24.4
Assembled Trucks	1,333.7	2,031.1	52.3
Automotive Parts	1,629.5	1,919.1	17.8
Capital Goods	8,899.8	10,967.8	23.2
Nonelectric Machinery	6,016.4	7,418.1	23.3
Business Machines	3,064.5	3,303.1	7.8
Metalworking Machinery	394.2	630.9	60.0
Agricultural Machinery	176.2	192.4	9.2
Specialized Industrial Machinery	639.9	631.7	-1.3
Scientific, Professional and Medical Equipment	225.6	292.3	29.6
Electric Machinery	2,739.4	3,375.4	23.2
Transportation Equipment	144.0	174.3	21.0
Consumer Goods	5,184.7	6,908.5	33.2
Video and Audio Recorders and Players and Stereo Equipment	1,639.0	2,662.3	62.4
Television Sets	306.9	376.4	22.6
Radio Receivers	138.6	157.9	13.9
Tableware and Glassware	187.6	206.9	10.3
Metal Cookware and Cutlery	181.8	190.1	4.6
Photographic and Optical Goods	476.3	470.0	-1.3
Clocks and Watches	182.7	230.3	26.1
Toys and Sporting Goods	198.0	264.9	33.8
Motorcycles and Parts	391.8	472.0	20.5
Clothing	233.9	238.0	1.8
Intermediate Goods	3,532.1	3,752.4	6.2
Steel Mill Products	1,458.5	1,731.6	18.7
Nonferrous Metals	265.8	263.3	-0.9
Organic Chemicals	251.5	298.3	18.6
Tires and Tubes	268.5	283.9	5.7
Textiles	337.3	358.7	6.3

Although deeper in the red in the April-June period, the trade deficit was far less of a drag on U.S. economic expansion than in 1985's first three months. Worsening trade results shaved 4.2 percentage points off the growth of inflation-adjusted gross national product during that quarter, limiting the rise to just 0.3 percent. In comparison, the deteriorating U.S. trade position cut the gain in real GNP during the April-June period by 1.3 percentage points or from 3.3 percent to 2 percent.

Forecasters generally expect the widening trade gap to take a reduced toll on the U.S. economy during the last two quarters of 1985 even as the imbalance moves toward the $150 billion mark for the year. Roughly one-third of this red ink will come from trade with Japan. The bilateral deficit already stands at $24.2 billion ($22.4 billion if imports are valued on a Customs basis), up from $17 billion ($15.5 billion) in the January-June 1984 period, and this figure could easily double by year-end, particularly if exports of industrial and agricultural inputs do not turn around quickly (see accompanying tables).

Susan MacKnight

Trends In Foreign Investment Income

By year-end, Japan will become the world's largest creditor nation while the United States will be the largest debtor country. Japan's 1984 net long-term capital outflow of $49.7 billion increased its net foreign assets to $74.3 billion (see JEI Report No. 26B, July 12, 1985) and Ministry of Finance officials expect that figure to top $100 billion by the end of 1985. At the same time, the United States lost its position as the world's preeminent creditor country following three years of large current account deficits and related net capital inflows. Sometime during the first half of 1985, the United States became a net debtor nation for the first time since 1914.

The long-run economic and political implications of this shift are uncertain. It is clear, however, that the changes in net asset positions will reduce the net investment income received by the United States while increasing Japan's, exacerbating the current account imbalances of each country.

As shown in the accompanying table, Japan's net investment income account went from an $0.8 billion deficit in 1981 to a $4.2 billion surplus in 1984. This $5 billion change in the balance was due to a $3 billion increase in income from abroad from 1981 to 1984 and a $2 billion drop in the amount paid to foreigners. Profits from direct investments, which amounted to $2.2 billion of Japan's total investment income of $18.8 billion in 1984, accounted for about one-fourth of the $3 billion rise, while interest on loans, portfolio investments and trade credits was responsible for the remaining three-fourths. This large expansion has contributed to the $30 billion increase in Japan's current account surplus during this period. The surplus on investment continued to expand in 1985, accounting for $3.5 billion of the huge current account surplus of $20 billion during the first six months of the year.

U.S. net investment income has fallen rapidly, reflecting the dissipation of America's net foreign asset position. In 1981, the $34.1

billion net investment income inflow more than offset the $28 billion merchandise trade deficit. In 1984, however, the investment income surplus was $19.1 billion, falling in the first quarter of 1985 to only $2.6 billion. This decline means that the United States can no longer maintain a balance on its current account while reporting a large merchandise trade deficit. Instead, the United States will have to achieve a balance in merchandise trade and business services if it is to balance its current account.

Randall S. Jones

Table 1: Selected Foreign Balances, Japan

(in billions of dollars)

	1981	1982	1983	1984	IQ 1984	IIQ 1984	IQ 1985	IIQ 1985
Current Account	$4.8	$6.8	$20.8	$35.0	$4.8	$10.0	$6.8	$13.3*
Merchandise Trade	20.0	18.1	31.5	44.3	7.6	11.8	8.9	14.1*
Services	-13.6	-9.8	-9.1	-7.7	-2.2	-1.5	-1.6	-0.6*
Investment Income	-0.8	1.7	3.1	4.2	0.8	1.4	1.3	2.2*

*Preliminary

Source: Bank of Japan

Table 2: Selected Foreign Balances, United States

(in billions of dollars, seasonally adjusted)

	1981	1982	1983	1984	IQ 1984	IIQ 1984	IQ 1985	IIQ 1985
Current Account	$6.3	-$8.1	-$40.8	-$101.5	-$19.1	-$24.5	-$30.0*	n.a.
Merchandise Trade	-28.0	-36.4	-62.0	-108.3	-25.6	-25.7	-29.4*	-33.4*
Services	42.3	36.8	30.2	19.9	9.1	4.0	2.7*	n.a.
Investment Income	34.1	29.5	25.4	19.1	8.2	3.6	2.6*	n.a.

*Preliminary

Source: Department of Commerce

IBM Interfaces With MITI's High Technology Patents

In debating the reasons for the rapid rise of the Japanese economy since the end of World War II, the close scientific cooperation between government and industry is often mentioned. The fruits of this cooperation, industrial patents, were in some cases jointly owned by the Japanese government and were licensed to Japanese companies for commercial use. Foreign access to these

Update On Japan's Venture Capital Industry

By all accounts, Japan's venture enterprises and venture capital firms are fulfilling their high-growth potential (see JEI Report No. 39A, October 12, 1984). According to a government survey, almost 20 percent of 863 venture businesses surveyed achieved at least 15 percent growth in 1984 and another 16 percent claimed growth of 40 percent or more. A leading economic journal reports that the number of venture firms has increased 40 percent since 1982 and similar growth is predicted for the next three years.

An annual survey by the Venture Enterprise Center, an independent agency of the Ministry of International Trade and Industry, shows that electronics remains the most popular area for Japanese venture entrepreneurs, accounting for 24 percent of all endeavors. Next are computer software companies (18.6 percent), robotics firms (16.4 percent), information and telecommunications services (10.9 percent), precision machinery makers (10.4 percent), new materials manufacturers (8.6 percent), energy firms (1.6 percent) and marketing concerns (1.5 percent). The VEC survey reveals that the average venture enterprise devotes more of its staff to research and development than the average small business -- 20 percent versus 5.8 percent -- and supplies them with more expensive equipment, spending an average of Y150 million ($625,000) per piece of equipment instead of the average Y32 million ($133,333). The agency forecasts a quadrupling of both sales and employment by venture businesses in the next five years.

Venture capital firms have kept pace with this furious growth, according to the VEC. The number of venture capital funds rose to 29 by the end of 1984, representing nearly Y89 billion ($371 million) in capital, up from 16 funds worth Y46 billion ($192 million) the previous year. Concurrently, the number of venture capital partners jumped from 323 to 615 between 1983 and 1984. Japanese venture investors continue to put most of their money into companies not listed on a major exchange (see Table 1). The popularity of warrants -- notes that grant an investor the right to purchase shares at a set price within a time limit in exchange for cash now -- and convertible bonds skyrocketed during 1984 thanks to a relaxation of regulatory procedures by the Ministry of Finance. The cumulative effects of the economic recovery and financial deregulation are apparent in the doubling of investments in 1984 over the year-earlier level.

Another encouraging trend brought out by the survey is the increasing flow of venture capital into the manufacturing sector (see Table 2). Although venture capitalists spent 72 percent more on non-manufacturing enterprises in 1984, manufacturing investments rose by 146 percent. As a consequence, this sector's share of the total value of investments rose from 53 percent to 58 percent. Its share of cases, however, declined one percentage point from 1983's level to 57 percent.

Despite these positive trends, Japanese venture enterprises still face significant difficulties. Although most funds are flowing to unlisted firms, these companies are relatively well-known and have an established track record. Very little venture capital (approximately 10 percent of all investments) is being used as seed money, meaning that entrepreneurs that possess only good ideas have a hard time translating them into reality. Rapid growth poses new problems for entrepreneurs and some observers predict that a shakeout will occur in several sectors. This is already apparent in the computer industry where three very promising companies, including personal computer pioneer Sord Computer Corp., have either closed their doors or have been bought out in recent months.

Japanese venture capitalists remain weak-hearted in comparison with their American competitors as indicated by the paucity of high-risk investments. Venture capital funds linked to major banks or securities houses continue to approach the business with an eye toward developing new clients for their associated financial institutions. In addition, the lack of experience in evaluating the potential of entrepreneurs' proposals remains glaring.

The fact that venture businesses have performed superbly in spite of these problems reflects the relative immaturity of the industry. The traditional financial structure has been able to accommodate the needs of the nascent venture capital industry. If it is to mature, however, these deficiencies must be corrected.

Jon Choy

Table 1: Japanese Venture Capital Investments by Type

(year-end balance in number of cases and millions of yen)

	1983		1984	
	Cases	Value	Cases	Value
Investments by General Investors				
Stocks	500	Y22,878	952	Y43,776
Listed Stocks	63	2,344	82	4,067
Unlisted Stocks	437	20,534	870	39,709
Warrants	83	4,324	204	6,600
Convertible Bonds			90	4,286
Total	583	27,202	1,246	54,662
Investments by Investor Partnerships				
Stocks	72	10,627	357	28,037
Listed Stocks	0	0	1	66
Unlisted Stocks	72	10,627	356	27,971
Warrants	10	405	29	786
Convertible Bonds			61	2,359
Total	82	11,032	447	31,182
Total Investments				
Stocks	572	33,505	1,309	71,813
Listed Stocks	63	2,344	83	4,133
Unlisted Stocks	509	31,161	1,226	67,680
Warrants	93	4,729	233	7,386
Convertible Bonds			151	6,645
Total	665	38,234	1,693	85,844

Source: Venture Enterprise Center, Ministry of International Trade and Industry.

Table 2: Japanese Venture Capital Investments by Industry

(year-end balance in number of cases and millions of yen)

	1983		1984	
Industry	Cases	Value	Cases	Value
Manufacturing	387	Y20,247	973	Y49,906
Food Products	20	584	50	2,024
Textiles	3	90	4	105
Apparel and Textile Products	20	450	22	684
Lumber and Wood Products	3	34	7	154
Household Articles and Furniture	9	321	18	764
Pulp and Paper	1	27	11	957
Printing and Publishing	4	78	10	190
Chemicals	28	1,952	72	4,549
Oil and Coal	0	0	0	0
Rubber Products	4	84	5	84
Leather and Leather Products	1	30	1	30
Glass and Cement	6	129	14	579
Steel	1	15	1	15
Nonferrous Metals	0	0	12	479
Metal Products	11	260	31	1,239
Nonelectric Machinery	45	3,107	91	3,702
Electric Machinery and Electronics	130	8,005	345	19,518
Transportation Machinery	13	249	13	303
Precision Machinery	48	2,984	182	9,968
Other Manufacturing	40	1,848	84	4,562
Services	88	4,371	288	10,620
Computer Software	35	990	142	5,183
Information Management	6	284	35	1,365
Data Bases	4	45	15	345
Other Information Services	1	158	10	342
Other Services	42	2,894	86	3,385
Distribution and Sales	75	4,222	210	8,983
Other	104	8,267	186	13,473
Restaurants	7	103	16	351
Construction	19	484	41	1,507
Finance	49	6,156	75	8,351
Transportation and Delivery	3	113	4	118
Real Estate	13	699	4	473
Other	13	712	46	2,673
Domestic Total	654	37,107	1,657	82,982
Foreign Investments	11	1,127	36	2,862
Overall Total	665	38,234	1,693	85,844

Source: Venture Enterprise Center, Ministry of International Trade and Industry.

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Japan's Trade Engine Downshifts To Low Gear

Japan's exports and imports show signs of cooling off after outpacing all growth forecasts for the past two years. According to Ministry of Finance statistics, the total value of exports and imports during the first half of 1985 declined from the levels recorded for the same period last year. At the same time, Japan's trade surplus increased because imports fell more rapidly than exports. These developments present two problems for Japanese policymakers: how to compensate for the reduced economic stimulus of the foreign sector; and how to calm trading partners disturbed by widening bilateral imbalances.

Compared with the first half of 1984, the total value of Japanese exports from January to June 1985 declined $237 million (0.3 percent), while imports contracted nearly $4.4 billion, a 6.4 percent reduction (see Table 1). A breakdown by geographic area shows that, except for a 6.4 percent hike in exports to North America and a 6 percent rise in African imports, exports and imports declined across the board. A finer analysis reveals that exports to the United States and China continue to move up strongly, while trade with others, particularly the developing countries, is off significantly from the year earlier.

Table 1: Japan's Trade by Area and Group

(in millions of dollars)

	Exports		Imports	
	January-June 1984*	January-June 1985*	January-June 1984*	January-June 1985*
Total	$82,501	$82,264	$68,998	$64,606
By Area				
Asia	28,235	27,714	36,085	33,402
Europe	13,652	12,913	7,565	6,611
North America	33,012	35,132	17,331	16,912
South America	1,156	1,001	2,199	1,809
Africa	3,076	2,357	1,557	1,651
Oceania	3,371	3,147	4,259	4,220
By Group				
Developed Countries	46,198	46,807	27,236	26,478
United States	27,949	30,187	13,435	13,414
European Community	9,688	9,012	4,600	4,168
Developing Countries	31,672	27,659	37,695	34,049
Latin America	4,088	3,931	3,686	2,953
Southeast Asia	18,227	16,311	16,118	14,873
Middle East	7,685	5,856	17,056	15,496
Africa	1,419	1,314	512	502
Communist Bloc	4,632	7,798	4,065	4,080
China	2,886	6,540	2,953	3,161
Soviet Union	1,302	1,400	734	632

*Columns may not add up due to rounding.

Source: Ministry of Finance

A product analysis of Japan's exports and imports includes bright and dark spots (see Table 2). While exports of nonelectric machinery, manufactured goods classified by material, and chemicals declined, this was balanced by increased sales of transportation equipment, electric machinery and miscellaneous manufactured goods like precision equipment. Solid export performances were recorded in the following product lines: steel, 3.5 percent higher; office equipment (which includes computers), up 4.5 percent; cars, a 5.3 percent gain; machine tools, up 10.3 percent; and television and radio

Table 2: Japan's Trade by Product

(in millions of dollars)

	Exports		Imports	
	January-June 1984*	January-June 1985*	January-June 1984*	January-June 1985*
Food and Live Animals	$592	$554	$7,450	$6,682
Beverages and Tobacco	75	59	499	461
Crude Materials, Inedible (except fuels)	621	600	9,929	9,127
Mineral Fuels	258	247	30,859	28,183
Coal	102	92	2,706	2,635
Petroleum and Petroleum Products	155	151	23,469	20,618
Natural and Manufactured Gas	0	4	4,684	4,929
Animal and Vegetable Oils and Fats	51	33	179	164
Chemicals	3,856	3,728	4,101	4,088
Medical and Pharmaceutical Products	181	179	607	632
Manufactured Goods Classified Mainly by Material	14,602	13,939	6,240	5,599
Leather and Leather Products	167	140	61	69
Rubber Products	989	889	87	78
Wood and Cork Products	49	42	415	415
Paper and Paper Products	479	493	276	265
Yarns, Fabrics and Made-up Goods	2,697	2,300	973	1,008
Stone, Glass and Cement	1,104	1,028	614	615
Steel Products	6,496	6,721	1,023	681
Nonferrous Metals	735	686	2,544	2,213
Metal Manufactures	1,886	1,640	245	255
Machinery and Transport Equipment	50,084	50,570	5,171	5,632
Nonelectric Machinery	13,576	13,461	2,120	2,308
Office Machines	3,452	3,609	597	765
Machine Tools	962	1,061	88	110
Electrical Machinery and Electronics	13,648	13,937	1,931	1,889
Television and Radio Equipment	5,057	5,588	228	212
Transportation Equipment	22,860	23,173	1,120	1,436
Cars	10,933	11,513	260	265
Miscellaneous Manufactures	11,537	11,694	2,814	2,894
Unclassified Commodities	845	838	1,756	1,777
Total	$82,501	$82,264	$68,998	$64,606

*Columns may not add up due to rounding.

Source: Ministry of Finance

equipment, a rise of 10.5 percent. On the import side, manufactured goods increased their share of total deliveries from 26.6 percent in 1984's first half to 28.2 percent this year. Purchases of machine tools, office machines and transportation equipment heated up, each posting 25 percent or better growth over last year. Reflecting global price declines, cheaper crude oil cut Japan's import bill by $5.7 billion through the first half of 1985.

The impact of this trade slowdown is becoming clear as most of Japan's leading economic indicators send mixed or negative signals. Cutbacks in investment plans by export-oriented corporations have been announced -- the first aftershocks of slumping trade growth. While many private economists have scaled back their forecasts for fiscal 1985 economic growth, the government is still clinging to its original projections, hoping that business investment will not weaken too much and that consumer spending will pick up as the holiday season nears. While consumer spending, which accounts for half of total demand, seems perkier than last year, most analysts agree that it will not make up for all of the decline in foreign demand. Even if this proves true, the Japanese economy is still likely to out-perform its U.S. rival. Nevertheless, Japanese policymakers are locked in heated debate over solutions to this "problem."

Jon Choy

Fiscal Austerity Or Stimulus -- Why Not Both?

As economic growth eases and trade frictions multiply, there is continuing debate over the direction of Japan's fiscal policy. Although Prime Minister Yasuhiro Nakasone continues to advocate tight limits on spending and a gradual approach to new taxes, there are recent signs of a policy relaxation.

After bustling along for nearly two years, the Japanese economy is finally beginning to run out of steam, primarily because of weakening demand abroad (see article in this issue). As first output and then investment of export-oriented industries slowed, consumer and government spending failed to take up the slack. The resulting lag in economic activity has increased pressures for an easier fiscal policy.

Domestic aluminum makers are the latest to add their voices to the fiscal stimulus chorus. In order to revive the slumping industry, manufacturers petitioned the Ministry of International Trade and Industry (MITI) for a more stimulative policy August 23.

The failure of Mr. Nakasone's action program of market and financial liberalizations to dispel the tensions in trade relations only adds to the momentum of fiscal stimulus advocates. Practically all foreign observers assert that stimulating domestic demand would ease trade frictions without reigniting inflation in Japan. Although most Japanese policymakers, Mr. Nakasone among them, agree that domestic demand must be the main pillar of sustained economic growth, they have shied away from a loose fiscal policy, citing Japan's large outstanding national debt. Nevertheless, the same week even Foreign Minister Shintaro Abe announced his support for some immediate outlays to calm foreign trading partners.

STATISTICAL SUPPLEMENT

Trade and Payments Data

(in millions of dollars unless otherwise indicated)

	1983	1984	January-June 1984	January-June 1985	April 1985	May 1985	June 1985
Japan's Balance of Payments							
Trade Balance	$31,454	$44,257	$19,385	$23,076*	$4,136*	$4,288*	$5,715*
Exports (f.o.b.)	145,468	168,290	81,614	81,394*	14,719*	14,234*	14,277*
Imports (f.o.b.)	114,014	124,033	62,229	58,318*	10,583*	9,946*	8,562*
Current Account Balance	20,799	35,003	14,788	20,072*	4,127*	3,577*	5,550*
Long-Term Capital (net)	-17,700	-49,651	-20,123	-28,743*	-5,554*	-4,678*	-8,156*
Overall Balance	5,177	-15,200	-8,332	-4,334	-1,122	1,012	-1,810
International Reserves (end of period)	24,496	26,313	25,208	27,569	26,841	27,328	27,569
Japan's Customs Clearance Trade							
Trade Balance	20,534	33,611	13,503	17,658	3,260	3,367	5,016
Exports (f.o.b.)	146,928	170,114	82,501	82,264	14,875	14,432	14,447
Cars	19,535	21,899	10,933	11,513	2,570	2,231	2,153
Steel	12,843	13,852	6,496	6,721	1,119	1,209	1,124
Imports (c.i.f.)	126,393	136,503	68,998	64,607	11,615	11,065	9,431
Crude Oil	40,063	39,379	23,469	17,766	3,067	2,871	2,107
Japan-U.S. Trade							
Trade Balance	18,181	33,075	14,515	16,772	3,460	3,412	3,326
Exports (f.o.b.)	42,829	59,937	27,949	30,187	5,785	5,700	5,354
Imports (c.i.f.)	24,648	26,862	13,434	13,415	2,325	2,288	2,028
Yen-Dollar Exchange Rate							
Tokyo Spot Market (end of period)	Y232.20	Y251.10	---	---	Y252.25	Y251.85	Y248.95
U.S.-Japan Trade							
Trade Balance	-19,289	-33,560	-15,453	-22,418	-4,198	-3,904	-4,073
Exports (f.a.s.)	21,894	23,575	11,585	11,550	1,733	1,815	1,751
Industrial Supplies	8,734	9,139	4,478	4,450	704	644	667
Food and Feed	5,555	5,929	2,982	2,307	370	384	339
Capital Goods	5,116	5,627	2,774	3,223	451	532	503
Consumer Goods	1,394	1,476	722	738	111	133	126
Imports (Customs)	41,183	57,135	27,038	33,968	5,931	5,719	5,824
Automotive Products	14,919	18,477	9,019	11,744	1,945	2,139	2,279
Industrial Supplies	5,391	7,276	3,532	3,752	611	623	652
Consumer Goods	8,296	11,266	5,185	6,909	1,291	1,111	1,058
Capital Goods	11,896	19,290	8,900	10,968	1,964	1,741	1,734

*Preliminary

STATISTICAL SUPPLEMENT

Japanese Economic Indicators

(percentage change from year-earlier period unless otherwise indicated)

	1983	1984	January-May 1984	January-May 1985	March 1985	April 1985	May 1985
Discount Rate (end of period)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Outstanding Money Supply	7.4%	7.8%	7.8%	8.1%	7.9%	8.4%	8.3%
Industrial Production	3.6%	11.1%	11.4%	6.7%	5.2%	7.1%	7.5%
Manufacturing Operating Rate	1.6%	7.3%	9.0%	2.2%	1.6%	3.4%	1.9%
Number of Bankruptcies	11.9%	8.8%	19.8%	-9.5%	-12.8%	-8.4%	-10.8%
Residential Construction Starts	-0.8%	4.4%	5.3%	5.8%	8.1%	3.2%	3.3%
Job Openings to Applications (ratio)	0.60	0.65	0.64	0.68	0.68	0.68	0.69
Nominal Wages	3.5%	4.5%	4.4%	3.7%	2.4%	3.8%	4.3%
Labor Productivity	4.5%	9.9%	10.0%**	6.8%**	6.5%	n.a.	n.a.
Wholesale Prices	-2.2%	-0.3%	-0.9%	0.6%	0.9%	0.6%	0.1%
Consumer Prices	1.9%	2.2%	2.3%	1.9%	1.6%	1.9%	1.6%
Yen-Based Export Prices	-6.0%	0.6%	-1.1%	4.1%	5.6%	4.3%	2.6%
Yen-Based Import Prices	-7.8%	-3.4%	-5.5%	2.8%	4.3%	3.3%	2.1%

**Through March of each year only.

For Japan's most recent GNP figures, see JEI Report No. 24B, June 28, 1985.

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JAPAN · ECONOMIC · INSTITUTE

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REPORT

NO. 34A September 6, 1985

JAPAN'S POLICIES FOR DECLINING INDUSTRIES: AN OVERVIEW

Summary

The rising number of financially troubled industries in the United States has rekindled American interest in Tokyo's adjustment policies for declining industries. These policies are designed to assist industries that can no longer compete internationally because of high input costs to regain competitiveness or at least viability, primarily by shedding excess capacity and forming business tie-ups in such areas as production and sales. The capacity-reduction part of the process, now in its eighth year, has produced results that are mixed at best. It has helped stabilize market conditions for some basic materials industries while not slowing the slide of others. This has led to a new debate in Japan about the effectiveness of government intervention in the adjustment process.

Managing the Adjustment of Declining Industries

The two oil crises of the 1970s, the steep run-up in prices of other industrial inputs and rising labor costs have permanently blunted the international competitive edge of a long list of products manufactured by Japan's chemicals, paper, textiles, steel, nonferrous metals and other basic materials industries. These same forces have also altered the production economics of many basic materials industries in the United States, confronting Washington as well as Tokyo with the question of whether government should assist sunset industries in adjusting to new conditions of competition.

Recent U.S. administrations, whether Republican or Democratic, have generally allowed the market to shift resources and workers out of declining industries, but this hands-off approach to restructuring has had its limits: when the political fallout from painful market-induced adjustments reaches a certain point, protectionist policies are all too often adopted that delay rather than promote adaptation. Japan has followed a different path, although not without internal dissension. Government, it is maintained, should facilitate the retrenchment of industries that are no longer internationally competitive, in part to minimize the economic disruption of the adjustment process and also because the major source of problems for these industries -- skyrocketing energy costs -- is not of their own making.

Government assistance to struggling industries has a long history in Japan. The major policy tool through the early 1970s was the recession cartel, which allows firms in an industry hit by a temporary reduction in demand to coordinate the cutback of production instead of waging a costly price war for sales -- the frequent response of Japanese manufacturers when markets shrink. In the wake of the first oil shock and the worldwide recession of 1974-75, however, Ministry of International Trade and Industry policymakers concluded that adjustment measures geared toward short-term drops in demand were no longer sufficient. Industrial casualties of the jump in energy costs (aluminum, electric furnace steel, paper and petrochemicals, to name just a few), as well as industries reeling from a long-run slide in demand (shipbuilding) or the loss of comparative advantage in labor-intensive products (textiles), required different, more comprehensive adjustment policies, MITI officials argued, since these industries were permanently saddled with excess capacity.

The ministry's solution was the Law on Temporary Measures for Stabilization of Specific Depressed Industries, passed by the Diet in May 1978 for a five-year period. This measure was not designed to phase out Japan's declining industries as some in the United States have described it. If anything, the objective was the exact opposite: to help troubled industries regain competitiveness or at least viability by speeding the elimination of excess capacity through coordinated cutbacks.

To this end, firms in industries designated as structurally depressed were granted antitrust immunity to reduce surplus capacity in line with plans worked out by MITI (or the relevant ministry) and its advisory group, the Industrial Structure Council. These restructuring plans contained forecasts of industry demand and supply, from which MITI calculated the amount of capacity that had to be decommissioned to clear the market as well as how much surplus plant and equipment should be scrapped and how much mothballed.

Manufacturers of 14 products spanning six industries eventually reduced capacity under the 1978 law -- shipbuilding, steel (ferrosilicon and electric furnace steel), nonferrous metals (primary aluminum), chemicals (ammonia, urea and phosphoric acid), paper (corrugated cardboard), and textiles (four types of synthetic fibers plus cotton and wool yarn) -- decommissioning roughly 95 percent of the aggregate plant and equipment targeted for disposal. Despite this near-perfect score, Japan's Fair Trade Commission and other domestic

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critics of government involvement in the adjustment process claimed that the depressed industries program was ineffective in helping sunset industries. Cutbacks in capacity were the result of market pressures, not MITI's plans, they maintained. Perhaps more telling was their observation that none of the industries covered by the law had overcome its problems; some managed to operate in the black for brief periods of time, but not even these industries had really turned the corner on profitability.

MITI actually used the continued financial problems of Japan's declining industries to its own advantage. Arguing that the 1979 oil crisis and the deep economic slump of 1980-82 had set back the timetable for restructuring, the ministry persuaded the Diet in May 1983 to renew the depressed industries law for another five years. The goal of the new legislation -- renamed the Law on Temporary Measures for Structural Adjustment of Specific Industries to signify its claimed compatibility with the international concept of positive adjustment policy -- remains unchanged: to restore the viability of troubled industries. Where the 1983 measure differs from its predecessor is in its implicit acknowledgement that the elimination of uncompetitive operations is necessary but not sufficient for restructuring; rationalization and modernization must be coupled with contraction.

The law therefore puts new weight on the achievement of economies of scale through joint purchasing, production, sales, storage, transportation and/or distribution arrangements among firms within a depressed industry; division of production or markets is also promoted, as are mergers. Equal emphasis is placed on cooperative research and development efforts in such areas as energy and raw material cost reduction, product quality improvements, and new product and process technologies. MITI had hoped to give collaborative activities, especially business tie-ups, an extra boost by winning antitrust immunity for them, but the FTC blocked this move. As a result, MITI must get clearance from the antitrust agency before approving business tie-ups, although joint disposal of surplus plant and equipment remains exempt from Japan's Anti-Monopoly Law.

While MITI lost the fight for broader antitrust immunity for troubled industries, it did win the battle for greater support from the Finance Ministry. The only financial incentive included in the 1978 law was a loan guarantee fund designed to ease the problems of scrapping plant and equipment that had been pledged as collateral for bank loans. In addition to extending the life of this fund, the new legislation makes available low-cost loans from the government-backed Japan Development Bank for underwriting the introduction of new technologies or the installation of more efficient plant and equipment; these funds can be used as well to cover the disposal of excess capacity. The law's twin aims of contraction and modernization are also encouraged through the tax system. Companies, for example, can carry forward losses from writing off scrapped equipment for up to ten years and receive an additional 18 percent depreciation allowance in the first year on approved investments. Moreover, the government will subsidize half of the cost of selected R&D projects -- an undertaking expected to amount to Y6 billion ($25 million at Y240=$1.00) in FY 1985. What the legislation does not provide are direct operating subsidies for companies in declining industries; they must cover the cost of production or suffer the bottom-line consequences.

Despite the broader thrust of the 1983 law, the mechanics of the legislation are an extension of the earlier measure. For an industry in trouble to be designated as structurally depressed, a majority of its companies must be operating in the red and two-thirds must agree to participate in a restructuring program. Once these qualifications are met, MITI maps out an industry improvement plan in consultation with the Industrial Structure Council. The plan stipulates how much excess capacity should be decommissioned (although there is now no breakdown between scrapping and idling), as well as the steps the industry should take to achieve viability, like energy conversion, joint operations in specific areas or the use of more efficient equipment. MITI has the right to place restrictions on new investment if it suspects industry members will circumvent the capacity-reduction target by replacing scrapped production lines with new equipment. It also has the option to instruct companies to form a cartel when there are indications that the industry might not otherwise implement the contraction part of its plan.

Plans have been worked out under the 1983 legislation for manufacturers of 26 products, including 11 holdovers from the old law (see Table 1). The same basic materials industries previously covered show up on the new list, but a broader cross-section of their output is generally represented this time. From chemicals come ethylene, polyolefins and four other petrochemical products, plus compound fertilizers and a fourth fertilizer ingredient. A fifth type of synthetic fiber is included in the textiles industry, while paper joins corrugated cardboard in that industry. Primary aluminum remains the only representative of the nonferrous metals industry, but steel industry coverage now extends to three ferroalloy products and electric line and cable, as well as electric furnace steel. Joining these five industries on the roll of designated declining industries are two first-timers -- cement and sugar.

Does Government Involvement Make a Difference?

While MITI policymakers are understandably quick to argue that government assistance to declining industries makes the adjustment process faster and more efficient, this view is shared by few economists. The Fair Trade Commission's economics department is certainly not alone in maintaining that the retrenchment of Japan's problem industries has been triggered by the market. For proof, these critics say, MITI need only look at ammonia and ferrosilicon, where capacity has been cut by more than the targeted amount and well ahead of schedule, or at primary aluminum, where capacity reduction preceded final approval of a restructuring plan.

Economists also point out that government-orchestrated capacity cutbacks allow inefficient producers to continue to exist, thereby delaying real adjustments. A market-directed reduction in plant and equipment should eliminate the least efficient production units, but because compromise is needed to win industry backing for a restructuring plan, inefficient manufacturers are given an extended lease on life, particularly if they have only one production unit. Contraction in the electric furnace steel industry, for example, has been hindered by the large number of single furnace operators, most of which would be forced out of business if they had to scale back capacity. Conversely, economists add, the concept of shared sacrifice can force manufacturers to decommission efficient units of production.

Moreover, analysts question the relevance of a program based largely on capacity shrinkage for products that have lost their international competitiveness because of Japan's high electricity costs. While a smaller operating base might provide some short-run relief to energy-intensive industries like aluminum, electric furnace steel and ferroalloys, these industries require technological breakthroughs in production for long-term survival or, barring that, huge rate subsidies. Since the first scenario is not at all certain to materialize and the second has been rejected by Tokyo, many industry observers suggest that the government should phase out energy-intensive industries that will never again be viable instead of trying to cushion their decline.

Doubts have also been expressed about the effectiveness of the depressed industries law in resolving problems caused by slumping demand or high labor costs. Shipbuilders cut capacity by 35 percent under the 1978 law, but the industry's financial condition continued to deteriorate in line with the slow pace of new orders. With no upturn in business in sight and a price war sweeping the industry, the Ministry of Transportation finally issued two-year operating rate guidelines for shipyards in April 1983, subsequently extending its recommendations through March 1987. Similarly, the cotton spinning industry, another dropout from the government's program, has only managed to remain in the vicinity of the break-even point by voluntarily reducing capacity and limiting production.

To the list of reservations about the efficiency and effectiveness of Japanese adjustment policies can be added the question of just how much influence the government has over the activities of declining industries. Some of the country's least competitive industries -- plywood, for example -- have remained outside the program, although a number of these holdouts, including plywood, fall under the jurisdiction of the Agriculture Ministry rather than MITI.

Not that MITI has a perfect batting record in other areas. It has failed to persuade the top producer of electric furnace steel to join the restructuring plan for that product and to secure the participation of the leading maker of corrugating medium in the capacity-reduction program for cardboard. The ministry has also been unable to deter companies in some declining industries from investing in additional facilities. Electric furnace steel makers expanded net capacity by 28.5 percent under the 1978 law, and paper mills continued to invest in new plant and equipment while a restructuring plan was being worked out for them. Paper producers, in fact, have been authorized to form a cartel to ensure compliance with the contraction part of their restructuring plan; so have manufacturers of corrugated cardboard, compound fertilizers, ethylene, polyolefins, polyvinyl chloride and cement.

The View from Washington

Doubts like these do not pervade the U.S. government's evaluation of Tokyo's policies for declining industries. In the words of Lionel H. Olmer, former under secretary of Commerce for international trade, the role of the Japanese government in the restructuring process is "crucial, pervasive and determinative." The Reagan administration is equally convinced that the depressed industries program is inherently import restrictive -- even though none of the industry plans contain formal restrictions on imports.

At the heart of this belief is the view that the various collaborative arrangements sanctioned by the depressed industries law enable Japan's high-cost manufacturers to keep price-competitive imports out of the market. How else can the low level of import penetration in most problem industries be explained, ask U.S. trade officials. When their Japanese counterparts cite the big and expanding volume of foreign aluminum ingot and petrochemicals flowing into the country as evidence that government help for declining industries does not preclude imports, Americans reply that imports would be even greater were it not for this assistance.

To some extent, the opposing positions of U.S. trade officials and business analysts on the issue of the effectiveness and efficiency of Japanese government involvement in the restructuring process reflect the divergent experiences of industries affected by this process. As the case studies that make up the second part of this two-part report will illustrate, capacity cutbacks have failed to stem the long-term decline of some basic materials industries but have brought supply sufficiently close to demand in others to stabilize the market temporarily.

For further information, contact Susan MacKnight.

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The views expressed in this report are those of the author and do not reflect those of the Japan Economic Institute.

Table 1: Plans for Disposal of Excess Capacity

(in metric tons)

Industry/Product	Date Plan Approved	Capacity To Be Decommissioned	Percent of Capacity Affected	Target Date for Completion	Capacity Decommissioned Through June 1985			Percent of Target
					Total	Scrapped	Mothballed	
Petrochemicals								
*Ethylene	6-17-83	2,290,000	36%	3-31-85	2,020,000	981,000	1,039,000	88%
*Polyethylene and Polypropylene	6-17-83	900,000	22	6-30-85	850,000	338,000	512,000	94
*Polyvinyl Chloride	6-17-83	490,000	24	3-31-85	450,000	424,000	26,000	92
*Ethylene Oxide	8-30-83	201,000	27	6-30-85	122,000	122,000	0	61
*Styrene Monomer	1-29-85	468,000	26	9-30-85	240,000	100,000	140,000	51
*Rigid PVC Pipe	8-30-83	116,000	18	3-31-84	116,000	115,000	1,000	100
Chemical Fertilizers								
Ammonia	5-24-83	660,000	20	6-30-86	844,000	584,000	260,000	128
Urea	5-24-83	830,000	36	6-30-86	698,000	698,000	0	84
Phosphoric Acid (wet process)	5-24-83	130,000	17	6-30-86	81,000	66,000	15,000	62
*Fused Phosphate	6-17-83	240,000	32	6-30-87	112,000	39,000	73,000	47
*Compound Fertilizers	6-17-83	810,000	13	6-30-87	522,000	419,000	103,000	64
Synthetic Fibers								
Nylon Filament	5-24-83	**	--	--	--	--	--	--
Polyacrylonitrile Staple	5-24-83	**	--	--	--	--	--	--
Polyester Filament	5-24-83	**	--	--	--	--	--	--
Polyester Staple	5-24-83	**	--	--	--	--	--	--
*Viscose Staple	8-2-83	47,700	15	6-30-86	9,800	0	9,800	21
Paper and Pulp								
*Paper	10-7-83	950,000	11	9-30-86	381,400***	295,100	86,300	40
Corrugated Cardboard	5-24-83	1,537,000	20	6-30-87	858,000***	455,000	403,000	56
Aluminum Ingot	5-24-83	1,290,000****	79	3-31-86	930,000	n.a.	n.a.	72
Ferroalloys								
Ferrosilicon	5-24-83	50,000	14	6-30-86	56,800	10,400	46,400	114
*High Carbon Ferrochrome	1-29-85	57,000	10	6-30-86	0	0	0	0
*Ferronickel	1-29-85	51,000	12	6-30-86	0	0	0	0
Electric Furnace Steel	5-24-83	3,800,000	14	3-31-87	1,393,000***	408,000	985,000	37
*Electric Line and Cable	9-26-84	86,000	14	8-31-85	82,800	77,000	5,800	96
*Cement	2-5-84	30,000,000	25	3-31-86	24,652,000	24,652,000	0	82
*Sugar	9-27-83	1,000,000	26	9-30-86	630,000	n.a.	n.a.	63

*Industries or products not covered by the 1978 law on depressed industries.

**No additional capacity is scheduled to be decommissioned by makers of nylon filament, polyacrylonitrile staple, polyester filament and polyester staple, which were covered by the 1978 law. The time limit on capacity expansion, however, was extended to June 30, 1986.

***Data as of May 1985 for paper, March 1985 for corrugated cardboard and March 1985 for electric furnace steel.

****Aluminum ingot capacity, which had already been reduced by 530,000 metric tons by the time the 1983 law went into effect, was originally targeted to be cut by an additional 410,000 metric tons under the new law. In March 1985, however, another 350,000 metric tons of capacity were targeted for disposal, for a cumulative cutback of 2,290,000 metric tons.

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REPORT

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White House Nixes Shoe Relief

After limited sole-searching, President Reagan on August 28 rejected proposals to impose quotas or higher tariffs on shoe imports, continuing a pattern that has infuriated Congress and left the administration vulnerable to charges that it is neglecting international trade issues. Rejecting domestic producer arguments that import relief is necessary to preserve employment and restore health to the struggling industry, the president sided with consumers, reasoning that the costs of preserving jobs in the industry was far too great to justify the move and would mean taking a step backward in the drive to increase access for American products overseas. The administration promised instead to pursue remedies provided under existing legislation for unfair trade practice complaints and said it would provide worker retraining through the Department of Labor for shoe industry employees affected by rising imports.

The administration's action brought a predictable outcry from several key members of Congress over the substance and direction of U.S. trade policies. Sens. John Danforth (R, Mo.) and Lloyd Bentsen (D, Tex.) both suggested that the administration's failure to protect American interests in an increasingly one-sided game left Congress with no choice but to take independent legislative initiatives. The president defended his policies in battle for the hearts and minds of Sankyo's institutional shareholders is already intense -- the presidents of the two firms are making the rounds and trading blows in public.

This brazen activity would not have been contemplated before Tokyo's financial deregulation exposed more financial institutions to international competition and opened new sources of finance to Japanese companies. The pressure to produce higher returns on investments has shattered the complacent attitude of institutional as well as small investors. Other holders of Sankyo Seiki shares may support the buyout because of Minebea's reputation for improving profits. On the other side of the equation, Minebea built its takeover war chest with funds from European money markets. Access to such foreign financial resources was limited prior to the liberalizations.

Ironically, these same liberalizations exposed Minebea in turn to takeover. Trafalgar Holdings of the United States acquired an option to buy Minebea's convertible and warrant bonds from a British financial house worth 23 percent of the ball bearing firm's outstanding shares, illustrating the risks of international finance. Minebea spokesmen reacted cautiously to the U.S. firm's announcement, citing a lack of hostile statements from the American suitor.

Although Minebea's growth plan is still unorthodox in the eyes of many Japanese, it is likely to become more common as various Japanese industries undergo a shakeout. As in other cases where the Japanese have borrowed know-how from foreigners, however, the takeover process will be distinctly Japanese. Forced mergers, rather than straightforward buyouts, will probably be the favored mode. In regard to the Minebea-Sankyo Seiki affair, new twists and turns could develop at any time, making Minebea's bid anything but assured.

Jon Choy

Japan-Korea Cooperation

On August 30, Japan and South Korea initialed an accord on science and technology intended to promote transfers of Japanese technology to Korea through government and other public institutions. The accord is a result of the summit meeting of Prime Minister Yasuhiro Nakasone and President Chun Doo Hwan last September. The Koreans had hoped to include a provision pledging the government of Japan to encourage the export of privately owned high technology to Korea. Tokyo objected to such a clause on the grounds that those exports should be decided by the private sector on a commercial basis, but did agree to mention the desirability of such exchanges in the preamble of the agreement. The two countries agreed to establish a committee to promote cooperation in the area of science and technology.

Japan is the largest foreign investor in South Korea, accounting for 47.4 percent of total foreign investment in that country, followed by the United States at 31.2 percent (see table). Increasing Japanese labor costs, liberalized restrictions on foreign investment in Korea, and the fear of being outmaneuvered by competitors in other developed countries have all encouraged Japanese investment in Korea. According to Chung Ju Yung, the founder of the

Hyundai Group (Korea's biggest business group), the small size of the domestic market in Japan and Korea relative to the United States will also encourage industrial cooperation. Manufacturing firms in the two countries will find it advantageous to share the risks involved in the development and mass-production of goods for the world market, he noted. Japan is also the most important source of Korea's technology transfers, accounting for imports of 215 technologies in 1984, roughly one-half the total volume. Japanese transfers to Korea were more than double those of the United States in 1984 and were also twice as large as Tokyo's technology exports in 1981.

Foreign Investment in Korea by Country

(in millions of dollars)

Country	1962-81	1982	1983	1984	Total	Percent Share
Japan	$633.3	$42.6	$167.5	$163.8	$1,007.2	47.4%
United States	310.3	107.6	53.4	191.0	662.3	31.2
Europe	177.9	9.8	23.4	49.8	260.9	12.3
Others	127.1	27.8	23.5	14.4	192.8	9.1
Total	1,248.6	187.8	267.8	419.0	2,123.2	100.0

Source: Korea, Ministry of Finance

The table also indicates, however, that Japanese investment in Korea declined slightly in 1984 to $163.8 million while investment by the United States more than tripled to $191 million. Several Japanese-Korean joint business ventures have been terminated unexpectedly as a result of problems on both sides. The Koreans were dismayed by the increasing trade deficit with Japan that resulted from expanded economic ties between the two countries. Seoul, which reported a $1.4 billion trade deficit overall in 1984, had a $3 billion deficit with Japan alone last year. Japanese manufacturers, meanwhile, were often unwilling to meet their Korean partners' demands for sophisticated production technologies, fearing that those technologies could be used to reduce Japan's market share in the future. In addition, some Japanese firms found production costs in Korea higher than originally anticipated, partly because Korean labor is organized into separate unions for foreign and domestic enterprises.

The agreement comes at a challenging time for the South Korean economy. Korean exports during the first six months of 1985 fell 4.1 percent over the year-earlier period, compared to a 19.6 percent rise in 1984. Korea's $43 billion foreign debt, the fourth-largest worldwide, has become a domestic political issue. Moreover, economic growth is forecast to dip slightly from 7.6 percent in 1984 to around 6.5 percent in 1985. On the positive side, inflation has been cut from 21.3 percent in 1981 to 2.3 percent in 1984.

Randall S. Jones

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JEI

REPORT

NO. 35A

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FISCAL POLICY AND THE TRADE DEFICIT

Summary

Congress has focused its attention on sectoral trade issues with Japan instead of concentrating on the underlying macroeconomic trends that influence trade. Divergent fiscal policies pursued in Washington and Tokyo have led to current account imbalances in both countries. Japan's declining government budget deficit has increased the level of private savings available for overseas investment. The increased Japanese capital outflow is, of course, matched by a higher current account surplus. The United States, with its large government deficit, has become a major capital importer and reports a large current account deficit.

Many of the solutions offered to narrow the U.S. trade deficit with Japan, such as protectionism and capital controls, would be counterproductive or ineffective. Instead, the United States should reduce its budget deficit and Japan should increase domestic investment through supply-side measures. Even if both countries eliminate their current account imbalances, however, the United States is still likely to run a trade deficit with Japan on the order of $15 to $20 billion a year because of the structures of the two economies.

The Current Situation

The U.S.-Japan economic relationship has been marked by friction over trade in such goods as cars, semiconductors and telecommunications equipment.

Congressional resentment toward Japan led to the resolution passed unanimously in March urging the president to retaliate against Japan. The macroeconomic issues underlying these sectoral disputes, however, have received less attention on the Hill.

In 1981, when the United States last reported a current account surplus, the U.S. trade deficit with Japan was $15.8 billion. In 1984, the United States had a huge current account deficit of $101.5 billion and the bilateral trade imbalance reached $33.6 billion. This $17.8 billion increase in the U.S. trade deficit with Japan has led to pressures for a protectionist response.

Even Japan's most vociferous critics do not claim that import restrictions were responsible for the increase in the U.S. trade deficit. The seven market opening measures announced by Tokyo during the past four years have lowered these barriers significantly. U.S. exports to Japan rose 8 percent from 1981 to 1984, in contrast to a decline in American shipments to the European Community during the same period.

The increase in the U.S. trade deficit with Japan is actually a result of the economic policies pursued by Washington and Tokyo. During the past five years, the two governments have followed divergent fiscal paths. Although the trade impact of fiscal policy was unintended, it has had a significant effect on the bilateral trade balance. While Japan has been steadily reducing its government budget deficit, the United States has run large deficits in the range of $200 billion annually.

A nation's current account balance (goods and services plus unilateral transfers) is determined by the difference between domestic savings and investment. When domestic investment and the government budget deficit do not absorb private savings, the remainder is invested overseas. That overseas investment must be matched by a corresponding current account surplus. A current account deficit occurs when domestic investment and the government deficit exceed private savings. The shortage of domestic savings is offset by an inflow of capital from abroad that matches the current account deficit. The relationship between the domestic savings and investment balance can be shown using national accounting identities (see Appendix).

Trends in the United States

Table 1 shows the trend in U.S. savings and investment during the past ten years. Between 1975 and 1982, the balance between savings and investment, shown in row 5, averaged about zero. The average current account (which, except for statistical discrepancy, equals the savings-investment balance) was also zero. During the past two years, however, the savings shortfall jumped to 2.4 percent of GNP, resulting in the $101.5 billion current account deficit of 1984.

Two possible explanations of the savings-investment shortfall during the past two years are a decline in private savings and an increase in private investment. During the past decade, gross private savings fluctuated between 16.5 percent and 18.4 percent of GNP. Personal savings accounted for about

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Table 1: U.S. Savings, Investment and Current Account

(percent of GNP)

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1. Gross Private Savings	16.0%	18.2%	17.1%	17.0%	17.3%	16.8%	16.5%	17.2%	17.1%	17.3%	18.4%
a. Personal Savings	5.6	6.1	4.8	4.1	4.1	4.0	4.2	4.6	4.4	3.6	4.3
b. Business Savings	10.4	12.2	12.3	13.0	13.2	12.8	12.4	12.6	12.6	13.7	14.2
2. Private Investment	14.5	13.3	15.0	16.9	17.9	17.5	15.3	16.4	13.5	14.3	17.4
3. Private Balance (1-2)	1.5	4.9	2.1	0.1	-0.6	-0.6	1.3	0.9	3.6	3.0	1.0
4. Government Balance	-1.1	-4.1	-2.1	-0.9	0.0	0.6	-1.2	-0.9	-3.8	-4.1	-3.4
a. Federal	-1.2	-4.5	-3.1	-2.4	-1.4	-0.7	-2.3	-2.2	-4.8	-5.4	-4.8
b. State and Local	0.2	0.4	1.0	1.5	1.4	1.3	1.2	1.3	1.1	1.3	1.4
5. Total Balance (3+4)	0.4	0.8	0.0	-0.8	-0.5	-0.1	0.1	0.0	-0.2	-1.0	-2.4
6. Current Account	0.2	1.2	0.2	-0.8	-0.7	0.0	0.1	0.2	-0.3	-1.3	-2.8

Source: Council of Economic Advisers, Economic Report of the President, 1985 one-fifth to one-third of the total, while business savings accounted for the remainder. Although low relative to other countries, savings as a share of GNP in 1984 were at the highest level in 40 years and exceeded private investment.

Many economists emphasize the role of the Economic Recovery Tax Act of 1981, which lowered the rate of taxation on income from new investments, in encouraging investment. The level of private investment in 1984, however, was not exceptionally high; in fact, its share of GNP was less than in 1978 and 1979. Moreover, the pool of savings was more than sufficient to finance the increased investment.

Neither of these factors, therefore, appears to explain the savings-investment imbalance and large current account deficit. It is the size of the government deficit, instead, that is primarily responsible for the imbalance. The huge government deficits during the last two years of vigorous economic growth were matched only during the recession years of 1975 and 1982. From 0.9 percent in 1981, the government deficit increased to 3.4 percent of GNP last year, overwhelming surplus private savings and pushing the savings-investment balance into the red. The federal government is entirely responsible for the increased deficits, since state and local government surpluses as a share of GNP were actually higher in 1984 than in 1981.

It is interesting to compare the recession years of 1975 and 1982. Federal government deficits in both years were large -- 4.5 and 4.8 percent of GNP, and private investment was depressed at about 13 percent-plus of GNP. Following the 1975 recession, the federal deficit's share of GNP was reduced to 2.4 percent in two years. Two years after the 1982 recession, however, the federal budget shortfall remained at a high 4.8 percent of GNP, despite the 6.8 rate of real economic growth in 1984. If the same degree of fiscal restraint on both spending and taxing that prevailed after the 1975 recession had been applied following the 1982 recession, the large savings-investment imbalance and accompanying current account deficit could probably have been avoided.

Trends in Japan

In addition to Japan's very high level of private savings, the total government budget, including social security and local governments, was in surplus prior to the first oil shock. The large pool of savings was absorbed by an equally high rate of private investment in the early 1970s. Following the 1973-74 oil crisis, however, investment fell substantially, averaging about 22 percent of GNP during the second half of the 1970s (see Table 2). This reduction in investment was offset by growing deficits in the government balance, which first fell into the red in FY 1975.

Japan's current account balance swung from a $13.9 billion deficit in FY 1979, the year of the second oil shock, to a $24.2 billion surplus in FY 1983. Two factors explain the changes in the current account and in the savings-investment balance, which increased from minus 1.5 percent to 2.3 percent of GNP: domestic private investment's share of GNP declined by 3 percentage points and the government imbalance as a share of GNP improved by 1.4 percentage points as a result of reduced central and local government budget deficits. The fiscal restraint exercised by Tokyo was in sharp contrast with

Table 2: Japan's Savings, Investment and Current Account

(percent of GNP)

	FY 1970	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983
1. Gross Private Savings	30.6%	26.2%	26.9%	26.7%	26.3%	26.0%	26.4%	26.1%	25.0%	25.5%
a. Household Savings	12.0	16.7	15.9	15.6	14.3	13.7	13.9	14.1	12.5	12.7
b. Business Savings	18.6	9.5	11.0	11.1	12.0	12.3	12.5	12.0	12.5	12.8
2. Private Investment	30.7	23.4	22.9	21.4	21.4	23.1	22.9	21.9	21.1	20.1
3. Private Balance (1-2)	0.0	2.8	4.0	5.3	4.9	2.9	3.4	4.1	3.9	5.3
4. Government Balance	1.9	-3.6	-3.5	-4.1	-4.1	-4.4	-4.0	-3.7	-3.5	-3.0
a. Central Government	0.0	-4.0	-4.3	-5.0	-4.9	-5.7	-5.5	-5.4	-5.4	-5.0
b. Social Security	2.3	2.5	2.4	2.8	2.5	2.7	2.8	2.9	2.9	2.7
c. Local Government	-0.4	-2.2	-1.6	-1.8	-1.7	-1.4	-1.3	-1.3	-1.0	-0.7
5. Total Balance (3+4)	1.8	-0.8	0.5	1.2	0.8	-1.5	-0.6	0.4	0.4	2.3
6. Current Account	1.2	0.1	0.9	1.9	1.3	-1.3	-0.5	0.7	1.0	2.2

Source: Economic Planning Agency, Annual Report on National Accounts, 1985

U.S. fiscal policy, where the government balance fell from 0.6 percent to minus 3.4 percent of GNP between 1979 and 1984.

Because the sum of the government deficit and domestic investment are not enough to absorb domestic savings, the Japanese invest a portion of their savings abroad. This foreign investment must be matched by a corresponding current account surplus.

Although household savings in Japan have fallen steadily since 1975, the level is still high compared to other countries. In 1983, household savings' share of GNP in Japan was 3.5 times higher than personal savings' share in the United States. One could say that the current account imbalances in the two countries are a result of a high savings rate in Japan and a low savings rate in the United States. But it should be noted that the low U.S. savings rate, combined with responsible fiscal policy, is not incompatible with a balanced current account. Given the historical constancy of personal savings rates, however, it is unlikely that U.S. savings and investment could be balanced by increasing personal savings. An easier approach would be to reduce the government deficit to past levels.

Possible Solutions

The large increase in the global U.S. trade deficit resulting from the savings-investment imbalance has, of course, affected this country's trade balance with Japan, its second-largest trading partner. A number of solutions, both good and bad, have been proposed to narrow the large bilateral trade deficit. Even without a change in policies, however, the problem should eventually disappear. At some point, foreign investors will refuse to put a larger share of their portfolios in dollar securities because the risk of an unbalanced portfolio will outweigh the advantage of higher returns. Once demand for dollar assets declines, the value of the dollar will fall and the trade balance will improve.

Still, there are several risks to a do-nothing approach. First, continued large trade deficits will intensify demands for import restrictions. Protectionist measures by the United States would likely lead to retaliation by other countries and have a negative effect on world economic growth. Second, the U.S. external debt will continue to grow while waiting for a correction in the dollar's exchange rate.

After three years of large current account deficits, the United States lost its position in 1984 as the world's largest creditor and became a net debtor nation for the first time since 1914. It is unprecedented for the world's largest economy to also be the largest debtor, and this situation may have profound political as well as economic effects. It is clear that the decline in net investment income resulting from the dissipation of its net asset position has exacerbated the U.S. current account deficit. In 1981, net investment income of $34 billion more than offset the $28 billion merchandise trade deficit. Dr. C. Fred Bergsten, Director of the Institute for International Economics, recently estimated that if the dollar remains at current levels, the U.S. net external debt will exceed $1 trillion by 1989. The United States would have to run a merchandise trade surplus of about $100 billion each year to finance interest payments on a net external debt of that magnitude.

Protectionism as a Solution - Political pressures are likely to force actions intended to reduce the trade deficit. Protectionism is probably the most counterproductive of the possible reactions to the deficit. A bill to levy a 25 percent tariff on imports from Japan, South Korea, Taiwan and Brazil was recently introduced in Congress. Although this measure is intended as a tax on foreigners, it will ultimately harm the U.S. economy. An import surcharge that reduces imports would raise the value of the dollar. As the dollar appreciates, exports will decline while imports regain some lost ground. The net effect is to lower the total volume of trade without much impact on the trade balance. In addition, the higher prices of imported goods would penalize consumers, and this inflationary impact would probably lead the Federal Reserve Board to tighten monetary policy, slowing economic growth.

Past experience with protectionism shows that industries that receive relief from imports are slow to adjust to foreign competition and are less competitive after protection is withdrawn. The temporary benefit to industries that compete with imports comes at the expense of sectors that depend on exports, which are the most productive and competitive industries in the economy.

An import surcharge would also lead to strains between this country and its trading partners, and would probably end the prospects for a new round of multilateral trade talks in the next few years. The debt problems of developing countries, which depend on exports to service their foreign debts, would be aggravated. Moreover, other countries would likely retaliate against the United States, reducing world trade and economic growth.

Restrictions on Capital Movements - Direct taxes and "administrative guidance" could be used to limit capital outflows from Japan or flows into the United States. Such policies, however, would be difficult to enforce given the size and sophistication of international capital markets. Moreover, they would be contrary to U.S. efforts to promote the liberalization of Japanese capital markets. It is also clear that as long as the deficit remains high, reductions in capital inflows would damage the U.S. economy. In running a budget deficit, the United States has chosen to consume more than it produces. Without an increase in capital inflows and the accompanying trade deficit, the budget deficit would crowd out domestic investment and interest-sensitive consumer purchases. In other words, capital inflows allow the excess demand generated by the budget deficit to be satisfied overseas. Given the large budget deficit, restrictions on capital inflows would raise U.S. interest rates and slow economic growth.

Monetary Policy - Altering the yen-dollar exchange rate through monetary policy has also been proposed. If monetary policy were more restrictive in Tokyo and less restrictive in Washington, the value of the dollar would decline. This option, however, ignores the domestic policy goals of central banks. Monetary policy in Japan has been relatively tight during the past several years. The discount rate has been pegged at 5 percent since the fall of 1983 and annual money supply growth (M_2+CDs) has averaged 7.7 percent since 1982. Given the expectations that inflation will continue in the 2 to 3 percent range, nominal short-term interest rates of about 6 percent imply real interest rates of 3 to 4 percent. The historically high level of real interest rates has led to frequent calls by the Japanese business community for a more accommodative policy to accelerate the pace of economic activity. Tokyo has maintained a tight monetary policy, however, to prevent a decline in the value of the yen.

Monetary policy in the United States, on the other hand, has been very expansionary during the past year, leading to concern about future inflation. The money supply (M1) has expanded at a high 14.5 percent annual rate during the past three months and is running $13.3 billion above target for this year. New surges in money supply growth will fuel inflationary expectations, leading to high interest rates and slower growth.

Exchange Market Intervention - Coordinated government intervention in exchange markets has also been proposed to correct the existing misalignment of currencies. Policies of "leaning with the wind" might convince the market of government's commitment to lower the value of the dollar and further the move to an underlying equilibrium. There is little evidence, however, that intervention can alter the value of the dollar for more than a very brief period of time. In the past, when capital flows were smaller, it was easier for governments to influence exchange rates. With the internationalization of capital markets during the past decade, however, flows of capital dwarf the official exchange reserves available for government intervention.

Expansion of Domestic Demand in Japan - An expansion of domestic demand in Japan through fiscal stimulus has been suggested by many observers, including some members of the ruling Liberal Democratic Party. A combination of increased government spending and lower taxes would increase the budget deficit and absorb more of Japan's excess domestic savings. Prime Minister Yasuhiro Nakasone, however, appears determined to maintain his government's policy of fiscal austerity. Guidelines adopted by the cabinet project only a 1.5 percent increase in government expenditures in FY 1986. A 1979 proposal by then prime minister Masayoshi Ohira for a tax increase to reduce the deficit resulted in an electoral setback for the LDP that has made subsequent governments sensitive to the public's antipathy to tax increases and led to the present policy to slow government spending instead.

Moreover, the Ministry of Finance remains committed to reducing the large government debt. Japan's ratio of long-term debt to GNP is 48 percent compared with 34 percent in the United States. Interest payments on the debt as a percentage of government expenditures are 19 percent in Japan and about 13 percent in the United States.

Given the relatively large public debt, supply-side measures to increase domestic demand are probably a more appropriate method of reflating Japan's economy. As shown in Table 2, private investment's share of GNP fell 3 percentage points from FY 1979 to FY 1983. Lower marginal tax rates on new investment would increase investment and utilize the large pool of savings. Deregulation and administrative reform would also encourage investment, whether by domestic companies or by foreign firms in Japan. A special advisory council has called on the government to make sweeping administrative changes to revitalize the Japanese economy. Its report suggested an easing of 254 regulations in ten fields. Some have suggested higher taxes on savings to encourage consumption and reduce savings. Tokyo is reluctant, however, to discourage savings given the country's rapidly aging population.

Market Opening Measures - In July, a new market access program that is intended to reduce trade frictions between the United States and Japan was issued by Tokyo, reducing or eliminating tariffs on 1,850 items, stipulating simpler testing and certification procedures, and extending the government procurement code to an additional 16 semi-public organizations. The further opening of the Japanese market is certainly a positive development that will benefit both countries. Lower import barriers increase efficiency by allocating resources to their most productive uses.

The more immediate issue, however, is whether this will reduce the political problems caused by the trade imbalance. According to Dr. Martin Feldstein, former chairman of the Council of Economic Advisers, the current U.S. criticism of Japan is not a result of the size of the trade deficit. He noted that the U.S. bilateral trade position has actually deteriorated less with Japan since 1980 than with either the European Community or Latin America. Instead, Feldstein said, "the true basis of this frustration is the sense that Japan as a government and as a people is being unfair in its pursuit of policies that preclude foreign products from Japanese markets." Tokyo apparently intends to alter this perception through its market opening package.

At this point, however, it appears that only a change in the trade balance will alter the perception of the fairness of Japanese trading practices. Even the White House said it would withhold judgment on the market opening plan "until the effect of the program on our exports is realized." While the result should eventually be an increase in U.S. exports, it will probably be too small and too late to defuse the current dispute. On their recent trip to Tokyo, members of the trade subcommittee of the House Ways and Means Committee urged Mr. Nakasone to cut Japan's trade surplus from an expected $50 billion this year to $15 billion during the next five years. Administration officials, however, predicted in early 1985 that removal of Japan's tariff and nontariff barriers would only increase U.S. exports by about $10 billion annually, and others estimate only a $5 billion increase. It appears, therefore, that market opening measures alone, while desirable, cannot reduce the surplus to a politically acceptable level.

Reduction of the U.S. Budget Deficit - The most important and obvious solution to the trade imbalance problem is lowering the U.S. budget deficit. A reduction of the federal deficit from 4.8 percent to 2.4 percent of GNP would eliminate the savings-investment imbalance. Deficit reduction, however, requires difficult decisions by political leaders on taxes and spending issues. The $55 billion reduction package agreed to in August represents a very modest beginning in reducing the deficit. Apparently, U.S. political leaders find it easier to criticize Japan than to take the difficult steps necessary to reduce the U.S. budget and trade deficit.

For further information, contact Randall S. Jones.

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The views expressed in this report are those of the author and do not necessarily reflect those of the Japan Economic Institute.

Appendix

On the product side, gross national product equals the sum of consumption, investment, government spending and net exports of goods and services: $(GNP=C+I+G+X-M)$. On the factor income side, GNP is defined as the sum of consumption, private savings, taxes and transfer payments to foreigners by private citizens: $(GNP=C+S+T+R)$. Combining these two definitions yields the result that the current account is equal to private savings plus the government surplus minus private investment: $(X-M-R)=S+(T-G)-I$.

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White House Moves To Derail Push For Protectionist Legislation

Confronted by a Congress seemingly intent on passing some form of protectionist legislation to show that at least one branch of government is concerned about the runaway U.S. trade deficit, the White House finally went on the offensive this past weekend. The administration "will continue to resist protectionist measures that would only raise prices, lock out trade, and destroy the jobs and prosperity trade bring to all," President Reagan reiterated to domestic critics of his trade policy during a September 7 radio

This "leakage" of demand rivals the budget deficit as a leading cause of the recent economic downturn, maintains the report, and illustrates one of the consequences of the administration's failure to coordinate macroeconomic policies with industrial and trade strategies. The study exhorts Congress to formulate policies, institutions and information systems that will coordinate these elements and spur the appropriate mix of fiscal and monetary tactics as well.

In fact, the argument presented in the work may be identified as "new wave" economic theory -- a school of thought that defies conventional economic wisdom and supports restrictions on trade in some cases. Although the study does not explicitly advocate protectionist legislation as a solution to U.S. economic woes, the conclusions that market forces are out of kilter and that short-term phenomena like the overvalued dollar are causing businesses to make long-term decisions about moving abroad or cutting back production support the argument for government protection of companies buffeted by the "shock" of currency fluctuations.

The consequences of such government intervention in the marketplace were addressed in another study published in a recent issue of the Federal Reserve Bank of New York's Quarterly Review. Economist Susan Hickok found that ongoing protection of the U.S. clothing, automobile and sugar industries cost U.S. consumers $14 billion last year, and pointed out that the amount is likely to increase in 1985 due to growing consumer demand and increased protection of the steel industry. If restrictions on food products, tobacco and motorcycles were included in her study, according to Ms. Hickok, the cost of protectionism for consumers would be even higher.

Sheri Hoptman

Japan's Exports To Middle East Oil-Exporting Countries

With the decline in oil prices and the Iran-Iraq war, Japan's exports to oil-exporting countries in the Middle East have contracted. Shipments to Japan's seven largest trading partners in the region fell from $14.4 billion in 1982 to $11.4 billion in 1984. The share of Japan's total exports going to these countries fell from 10.4 percent in 1982 to 5.8 percent during the first six months of this year as shipments declined 25.1 percent from their January-June 1984 level.

One result of this slide has been an increase in Japan's dependence on the U.S. market. The U.S. share of Japan's exports rose from 25.4 percent in 1981 to 36.7 percent during the first half of 1985. The United States accounted for about 118 percent of the increase in Japan's exports from 1981 to 1984. In other words, Japanese exports to this country rose by $21.3 billion, while its exports to the rest of the world declined by $2.6 billion. Such dependence on a single market poses considerable risk for Japan and is probably not sustainable in the long run.

Japan's Exports to Middle East Oil-Exporting Countries and the United States

(in millions of dollars, f.o.b. value basis)

Country	1981	1982	1983	1984	January-June 1985
Iran	$1,486	$934	$2,820	$1,692	$504
Iraq	3,026	2,755	631	806	526
Kuwait	1,648	1,790	1,7631	1,432	805
Oman	454	461	468	508	285
Qatar	268	347	233	175	91
Saudi Arabia	5,876	6,621	6,687	5,634	2,010
United Arab Emirates	1,494	1,493	1,357	1,126	545
Total	14,252	14,401	13,959	11,373	4,765
Percent of total exports	9.4%	10.4%	9.5%	6.7%	5.8%
United States	$38,609	$36,330	$42,829	$59,937	$30,187
Percent of total exports	25.4%	26.2%	29.1%	35.2%	36.7%

Source: Japan Tariff Association

Randall S. Jones

Party Contributions Near Record

Despite the absence of national elections during the year, contributions to Japan's political parties reached a near record during fiscal 1984, according to records released September 2 by the Home Affairs Ministry. Total contributions were off from 1983, but at Y116 billion ($483 million) the total was second only to last year's Y147.2 billion ($613.3 million) record. All major political parties showed declines in contributions, although the Liberal Democratic Party suffered the largest drop, bringing in just over Y13.2 billion ($55 million), a drop of Y8.7 billion from the previous year.

Japanese analysts are interpreting the significance of this downturn vis-a-vis its implications for the prime minister's challengers. This view holds that the contribution pattern reflects preparations for the "post-Nakasone" period, which will be directed by one of the party's new leaders. If that is the case, it could mean serious trouble for the Suzuki faction and its principal candidate for the LDP presidency -- former foreign minister Kiichi Miyazawa. This faction suffered the largest drop in contributions, which fell to less than half of the previous year's level. While the Nakasone faction faced a comparable decline, the Tanaka faction suffered least with a drop of only 14 percent. Significantly, groups associated with Finance Minister Noboru Takeshita, frequently mentioned as a Nakasone successor, fared well; their income remained virtually unchanged.

Major Donations to Political Parties*

(in millions of yen and millions of dollars)

	FY 1983	FY 1984
Japan Communist Party (JCP)	Y22,903.2	Y21,167.4 ($88.2)
Liberal Democratic Party (LDP)	21,938.4	13,235.8 (55.1)
Komeito	10,179.2	9,250.3 (38.5)
Japan Socialist Party (DSP)	6,533.7	6,323.3 (26.3)
Democratic Socialist Party (DSP)	3,484.4	1,673.3 (7.0)
New Liberal Club (NLC)	567.2	420.3 (1.8)
Social Democratic Federation (Shaminren)	87.3	27.8 (0.1)

Top Recipients Among LDP Factions

(in millions of yen)

Faction	FY 1982	FY 1983	FY 1984
Nakasone	Y1,527.2	Y1,979.4	Y1,090.0
Tanaka	466.9	959.9	594.4
Fukuda	1,115.0	1,614.0	1,171.4
Suzuki	471.4	1,423.2	298.5
Komoto	1,228.1	1,548.8	902.8

*Totals for major donations to political parties only. Party totals do not include donations to individuals or party-affiliated organizations.

Source: Ministry of Home Affairs

The new leader theory is not totally validated by the contributions tally, but certainly the relative standing of the two leading candidates to succeed Mr. Nakasone -- Finance Minister Takeshita and Foreign Minister Shintaro Abe -- remain strong compared with that of the incumbent. Although the Tanaka faction now faces severe problems resulting from the continued illness of its leader, Kakuei Tanaka, the group's dominant role in Japanese politics is demonstrated by the fact that it faced only a marginal decline in income.

The "post-Nakasone" era may also be far away if the current prime minister has anything to say about it. Although the kitties for potential challengers have remained sound, it will take more than just money to unseat Mr. Nakasone, who still enjoys unprecedented popularity among voters and may succeed in realigning cabinet and LDP party positions to reflect that popularity. Such a move would strengthen his position within the LDP and enhance his chances for a third term as party president and prime minister.

Michael W. Chinworth

JNR Reform Drive Thrown Into Full Throttle

Despite the fact that the Japanese National Railways reported a smaller net operating loss in fiscal year 1984 (April 1, 1984-March 31, 1985) than in the year earlier, Prime Minister Yasuhiro Nakasone is determined to privatize and reorganize the troubled public corporation (see JEI Report No. 26A, July 12, 1985). The JNR rehabilitation plan poses major challenges to politicians and labor leaders.

At the end of August, JNR officials reported that the transportation giant lost Y1,650.4 billion ($6.9 billion) in fiscal 1984, Y10 billion ($42 million) less than the previous year. Operating income rose Y90.9 billion ($379 million) to Y3,389.8 billion ($14.1 billion), while expenses totaled Y5,209.1 billion ($21.7 billion), a gain of Y69 billion ($288 million). Profits totaling Y34.5 billion ($144 million) from operations of trunk lines combined with Y168.9 billion ($704 million) in non-operating income (mostly from land sales) were primarily responsible for reducing the red ink. Despite fare increases, ridership increased 7.1 percent, also contributing to the contraction. Losses attributable to what JNR calls inefficient management practices were cut Y66 billion ($275 million) to Y576.8 billion ($2.4 billion). Personnel as well as materials costs also fell. On the negative side, losses by local rail and bus service increased Y33.5 billion ($140 million) to Y395.9 billion ($1.6 billion). JNR's accumulated deficit totaled almost Y12.3 trillion ($51 billion), pushing total long-term debt up to just over Y21.8 trillion ($90.9 billion).

To plug this drain on the government's treasury, a committee appointed by the prime minister to map out JNR's reform recommended splitting JNR into at least 24 companies: one or more Shinkansen (bullet train) firms, one or more freight services, six local passenger service operations, 13 local bus companies, a telecommunications business and a research organization. Citing the influence of the Diet on route and personnel decisions as a major source of inefficiency in JNR operations, the recommendations call for all of the new companies to be privately managed.

Local rail passenger services would be divided among Higashi Nihon Kaisha (eastern Honshu), Tokai Kaisha (central Honshu), Nishi Nihon Kaisha (western Honshu), and one company each for the smaller islands of Hokkaido, Kyushu and Shikoku. A separate firm would own all the bullet train lines, which would be leased to the six local firms. JNR's cargo operations would be taken over by one company, its budding telecommunications operations by another, and its two research institutes would be merged into a third firm. Local bus lines would initially be operated by the six regional companies but eventually would be spun off into 13 independent operations. Any remaining operations would be handled by a new firm, dubbed the "old JNR."

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REPORT

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EDUCATIONAL REFORM: PRINCIPLES AND POLITICS

Summary:

Why would a country with a literacy rate of 99 percent be dissatisfied with its educational system? Despite educational standards that are among the highest in the world and unparalleled in certain subject areas, the Japanese government, under the leadership of Prime Minister Yasuhiro Nakasone, is seriously addressing the issue of rectifying perceived weaknesses in a system that has made possible much of the country's postwar economic progress.

At issue is not only the quality of instruction in the schools but also the social values underlying the educational system. Although the current round of reformist debate may lead to few changes, if any, the fact that Japan is even undertaking such an analysis provides insights into the way Japanese society functions and has profound implications for its economic competitors.

The Education System: Origins and Pre-War Developments

One of the reasons Japan was able to modernize so rapidly after nearly three centuries of isolation was because it had already developed an extensive educational system. The first formal schools in Japan were established in the mid-1600s by ruling daimyo in local fiefs to provide education for their samurai retainers. The apparent motivation for establishing the schools was to ensure that retainers possessed sufficient educational skills conducive to leadership along with combat skills necessary for attaining and defending the fiefdoms. Schools supported by local governmental authorities were established shortly afterwards for training promising local notables for leadership roles in the communities. The final element of the early education system were the terakoya, elementary schools for commoners attached to local temples and supported by funds from the priests. It is significant to note that much of the thrust of education from the 1600s on was for preparing elites to assume their roles in society, along with the goal of elevating the average educational standards for the masses. These contradictory elements are the central issues in much of the present debate on educational reform.

By 1780, there were 49 daimyo-managed domain schools, 54 gogaku schools and 558 terakoya. These numbers grew rapidly for the next 40 years, until a total of at least 12,000 and perhaps as many as 17,000 schools dotted the countryside, most of them temple elementary schools for commoners. Although precise statistics are unavailable, reputable scholars have concluded that the literacy rate in Japan by the early 1870s was between 40 and 50 percent for males and in the neighborhood of 15 percent for women.

A formal, centrally administered education system was established during the Meiji era. The system that developed over the early Meiji years remained virtually unchanged until the postwar Occupation period. The school system then was characterized by a six-year elementary program compulsory for both males and females. The educational path that followed depended on one's status, sex and abilities (primarily the former two). Under the pre-war system, males faced an additional six years of compulsory, but part-time education. Options for girls were fewer, but higher education opportunities were available in some cases. No uniform educational system existed beyond the elementary level. Instead, there were a series of higher learning institutions that ultimately led students to more learned fields or various levels of vocational training. The pre-war system was criticized for its relative lack of egalitarianism, although in recent years certain features, primarily the variety of educational institutions available, have found defenders.

Present State of Education

Significant alterations were made in the educational system during the Occupation period. Multiple track schooling was replaced by a uniform structure along the lines of the United States system, focusing on six years of elementary education, three years in junior high schools, three-year high schools and a four-year college program. Compulsory education was expanded to nine years. Authorities vastly increased opportunities for university-level training at a rate that many American and Japanese scholars feared would dilute the value of the education.

The Japanese educational system today is arguably the finest in the world. Educators around the globe recognize the capabilities of Japanese students in mathematics, for example, concluding that much of the nation's economic performance is attributable to the caliber of its academic institutions -- just as it is suggested that reduced American competitiveness is the direct result of lower overall educational standards and the continued emphasis of liberal arts at the expense of the sciences.

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There are now more than 58,000 educational institutions in Japan with total enrollment of more than 26.7 million. Despite the fact that only the first nine years of school are compulsory, fully 94 percent of Japan's youth attend high schools, with about a 2 percent dropout rate. More than 30 percent of high-school graduates enroll in higher learning institutions, a rate comparable to this country's.

Yet the educational system has come under fire for allegedly producing students who are moribund -- burned out from years of cramming for selective entrance examinations to the nation's elite universities. Japan has become, some insist, a society that pursues prestigious degrees at the expense of individual values, and neglects to impart an overall perspective that gives a healthy meaning to life. Critics charge that pressures begin in the pre-school years and compound until the goal is attained. Increasing numbers experience a sense of aimlessness by peaking out at 19, or become social dropouts -- even suicide statistics -- in the most extreme cases. There is evidence of increased school violence, which has been blamed in part on rigid advancement systems that allow little, if any, room for flexibility or for individuals to "discover themselves."

The core of the system of advancement is the entrance examination system. Exams can begin as early as pre-school, but certainly by junior high school. Pressures culminate at the collegiate level, where there is no uniform examination similar to the Scholastic Aptitude Test in the United States that allows students to take a single test and submit the same score to one or more schools. Therefore, students must set their goal for a single school and focus entirely on preparing for that instutition's examination to advance. Schools hold their testing sessions on only one or two days, effectively limiting a student's potential selections. Those who fail to advance can sometimes opt for a lesser institution if vacancies develop, but usually are forced to remain outside the educational system for a year or more to prepare again for the university examination.

One of the most serious criticisms of the present system is that it is not so much directed toward developing the students' innate abilities as toward selecting the members of society that will be allowed to enter the elite ranks. Education has traditionally been viewed as the "ticket" to higher society. The terakoyo of earlier centuries produced many of Japan's leaders of the 19th century, and education was often the path for sons and ocassionally daughters of the merchant class to advance in society. Today, admission to the "right" university virtually guarantees entry to the upper ranks of the business world or to a prestigious government career. Educators argue that while academic institutions should indeed provide equal opportunities for advancement, the present system loses sight of education in favor of advancement.

While this litany of weaknesses is familiar to both Japanese and Americans, an equally profound concern is the focus of a growing group of academics in Japan. A country whose ultimate resource is its people, Japan is painfully sensitive to its economic dependence, as evidenced by what some term an export mentality and never-ending concerns over resource availability. This sense of vulnerability underlies much of the current motivation for re-examining the nation's educational goals. Economists assume that the country cannot continue exporting automobiles forever; competition from developing nations has already resulted in reduced global market shares in shipping, steel and other key Japanese industries and most analysts forecast a continuing decline. In a world where Japan will be forced to live by its wits and not its VCR exports, many educators and government officials argue that examination of the educational system is critical, for although it may be good enough for now -- or perhaps even superior -- it will not be enough to assure survival in the future.

Previous Reform Drives

In 1970 the Ministry of Education initiated a major drive to define problem areas in the educational system and draft possible solutions for those ills. The final report of the reform committee, issued in 1971, identified the system's rigidity, harsh examination system and the extremely high priority on achievement as the principal weaknesses, but failed to propose the means to rectify these problems. That was just as well, since the fervor surrounding reform faded as the oil shocks of the early 1970s began dominating press headlines and policymakers' attention.

Appearing at the same time as the Education Ministry's review was a study issued by a special committee of the Organization for Economic Cooperation and Development. This study, prepared in 1970 and released the following year, cited one weakness after another in Japan's educational system, particularly at the university level. The academic world was criticized for its conformity, lack of innovative teaching, overemphasis on testing and Byzantine administration. The OECD report contributed to the general debate about education in Japan, but was insufficient to push educators to institute significant reforms.

The Nakasone Initiative

In 1982, the new prime minister, Yasuhiro Nakasone, identified educational reform as a major issue and began to focus attention on the subject once again. To understand the thrust of the current reform initiative, it is essential to try to identify the philosphical underpinnings of the prime minister's view of education.

Much has been made of Mr. Nakasone's reference to "settling the postwar accounts." Although he has never elaborated on the notion, his actions and the policy issues he has placed at the top of his agenda indicate its general thrust. Mr. Nakasone has tackled many of the postwar political taboos with the apparent intention of ending the era once and for all, enabling Japan to enter the international arena without any encumbrances. The steps he has taken thus far are intended both to restore the essence of Japanese society, which he apparently feels has either slipped away due to material excesses and increased self-indulgence, or was denied Japan by virtue of the Occupation reforms.

Among Nakasone's top concerns are defense, administrative reform and education -- issues that are symbolic but represent problems that the prime minister apparently feels plague Japan. In all cases, the thrust of his policies has been to institute innovations or rectify old policies that for one reason or another limit Japan's potential to assume its full global responsibilities and prerogatives.

Take defense. The one percent of gross national product limit on defense spending has restricted the country's ability to expand its Self-Defense Forces and assume a larger regional security role. Mr. Nakasone, while hedging when appropriate, has not gone to great lengths to hide his dislike for a policy that places arbitrary limits on the country's options and restricts what he sees as Japan's right to defend itself. While concerned with international cooperation, the prime minister seems more attuned to the fact that the spending cap inhibits Japan's defense options and impinges on the country's sovereignty. While finding a replacement for the one percent limit, or abolishing it altogether has been an exceedingly touchy task, Mr. Nakasone has not shied away from the issue, despite the fact that political expedience would favor dropping it.

Administrative reform is another example, but in this case the emphasis is on eliminating outdated structures that constrict internal economic growth and, by implication, Japan's ability not simply to survive but to remain ahead of the pack in global competition. Thus far, the telecommunications and tobacco monopolies have been restructured, allowing the government to keep a hand in developments in these fields while alleviating the budgetary pressures that result from inefficiency. Reorganizing the Japanese National Railway system -- should it actually come to pass -- will further reduce government budget problems, enhancing the country's economic stability for the coming decades.

Educational reform combines elements of economic as well as spiritual concerns. The prime minister's concept of post-Nakasone Japan endows it with confidence in its own uniqueness, operating as an equal among major nations in all economic and political spheres. To achieve that plateau, the country must assure its economic viability but also rediscover its essential qualities. Education is a key factor in both realms.

This is where the issue of educational reform gets sticky. Japan is currently reassessing its postwar experiences and, some contend, glossing over the war and instituting a revisionist philosophy regarding its responsibilities and actions. For the younger generation, which learned little of the war because of a temporary ban by Occupation authorities on the teaching of Japanese history, the grounds are fertile for absorbing what many fear will be a distorted perception of the past and an equally skewed view of Japan's optimal role in the future. Mr. Nakasone would certainly like to relieve Japan of any lingering wartime guilt and restore a sense of pride to a younger generation that seems increasingly aimless by Japanese standards. To critics, however, this suggests an unwelcome return to rampant nationalism.

Much of the debate over the "6-3-3" system -- six years of elementary school and three each in junior high and high school -- is attributed to this post-Occupation fever, which suggests that critics favor a restoration of the pre-war grade levels or some other alternative simply because the present system was introduced by a foreign force. These sentiments are particularly evident in the proliferation of calls to restore the teaching of morals in the public schools. Although some authorities now say it was a mistake to totally eliminate moral education after the war -- just at a time when new values were being sought -- many Japanese scholars and outside observers feel that "moral education" smacks of pre-war emperor worship. Seconding that sentiment, the powerful Japan Teacher's Union (Nikkyoso) views talk of moral education as an effort to inject government policies into the classroom and establish state-sanctioned moral guidelines for hiring and firing teachers. To understand the depth of the emotions surrounding this issue, one need only compare it with school prayer or similar issues in this country.

Another concern is that the prime minister is trying to get political mileage for career purposes. Although concerns over the quality of education are evident among students, parents and top education officials, some view Mr. Nakasone's efforts to draw the issue into the political spectrum as a means of creating a bogus dispute to further his ambitions. This was particularly evident in the 1983 lower house elections. Mr. Nakasone's critics claimed that he was trying to divert attention from government economic policies and the fiasco of Kakuei Tanaka's conviction by focusing on educational reform, a legitimate concern for students and parents but hardly the subject of a national election campaign. Similar criticism has emerged in the wake of the prime minister's expressed interest in raising the issue during next year's Tokyo summit.

An emotional aspect of the argument about educational goals in Japan concerns the wisdom of injecting the strong sense of self that in the United States favors the individual over the greater good of society. Overstating the case somewhat, many Japanese feel that the United States has lost its drive to compete and the strength that enabled the country to become a global power. This view from across the Pacific decries the problems produced by an absence of moral resolve, as evidenced by shoddy workmanship in products and massive social problems in the schools. Japan has more openly embraced many other American values: an emphasis on the individual, a desire for greater leisure and an appreciation for the needs of the family. But some officials apparently hope to nip this trend in the bud before it develops the excesses that they see plaguing the United States. Hence, the emphasis on reforming schools. Educational reform could be the means for retaining the best of both worlds: the flexibility that allows individuals to reach their full potential coexisting with social values that underscore the importance of placing society's welfare above that of any particular individual.

Ad Hoc Committee Recommendations

The Nakasone cabinet established a special advisory commission on educational reform on August 7, 1984. Under the chairmanship of Michio Okamoto, former president of the prestigious Kyoto University, the commission in short order released general observations and recommendations for implementing a number of broad changes. Presented formally to the cabinet June 26, 1985, the commission's recommendations sharply resembled those of a decade before -- suggesting that the problems have been known for some time -- with generous doses of the Nakasone philosophy thrown in. Among its remarks are the following:

- Although Japan's educational system has served as a social equalizer, enabling families of diverse backgrounds to benefit from the country's economic growth, the system has contributed to a situation where individual personality strengths are not recognized and indeed may be discouraged. This may be a contributing factor in the increase in unrest in the schools, which have seen a disturbing rise in violence.

- Rather than emphasizing education for its role in establishing social equality, society has come to view the educational system as a means to achieve status. This has produced negative social consequences that must be addressed.

- Revisions are required in the following areas: additional options in established curricula; opportunities for individual expression and creativity; emphasis on the fundamentals of education, including moral values; and an appreciation of Japan's international role.

- Continuing education should be fostered to provide outlets for those who have already finished their formal schooling and to facilitate adjustments to changing social and economic conditions.

- Creativity should be encouraged. "Creativity, the ability to think, expressiveness and the will to act," the report insists, "will be the qualities needed for an individual [to cope] with the social changes of the twenty-first century." Rather than emphasizing memorization of facts, education should be structured so that individuals "acquire and apply information properly, think independently, create and express themselves."

The council also set its agenda for implementing these reforms by detailing areas of future discussions. The commission is presently reviewing the administrative structure, the role of research in teaching, factors affecting the academic environment, advanced degrees, and application processes -- including the notorious examination system.

In some respects, the conservatism of the commission is as significant as the proposals themselves. For example, the phrase "fundamentals of education" refers primarily to the moral and social values imparted by the system, not reading, writing and arithmetic. The commission report reflects a consensus that the system is conformist in nature, but the authors are equally cautious in endorsing specific proposals for allowing greater individuality, apparently because of fears about the negative consequences of such a step. While calling for "internationalizing" the Japanese educational system through greater student exchange programs, it made little or no mention of remedial education for students who go abroad or even shifting the start of the school year from April to September, two relatively simple steps that would facilitate such exchanges.

Implementing Reforms

Implementing the proposed changes will be difficult since it conflicts with many values that are deeply ingrained. The foremost conflict will involve encouraging individuality in a society in which group values are emphasized. An old adage in Japan has it that the "extruding nail will be hammered down." Japanese society not only discourages one from standing out but in some cases punishes the individual for doing so. Japanese students attending exchange programs abroad, for example, are not rewarded but in a sense are punished because they fall behind their colleagues, thus jeopardizing their chances of passing the difficult college entrance examinations. What is considered to be a valuable, positive experience in most societies is instead a risky decision that endangers Japanese students' educational and even career goals.

Related to this dilemma is the Japanese concept of equality. Where equality in the American educational system implies equal opportunity for individuals to excel, the Japanese concept refers to equality of achievement. An equitable society is one in which all members are the same in terms of achievement and social status. Obviously, every individual in Japanese society is not equal in that sense; only a select few go on to enter Tokyo University and are virtually assured of prestigious careers in business or government. However, the dilemma facing the reformers is that not all students have an equal opportunity in practical terms to enter Tokyo University (and even those who do sometimes make sacrifices that may not be worthwhile in a societal sense). Consequently, there is increasing pressure for greater equality of opportunity, with the feeling that the minimum educational and economic standards in Japanese society are now high enough to ensure Japanese-style equality to most of the population.

Intertwined with this emotional argument is a practical concern over maintaining high educational standards. Japanese educators, particularly those involved in reform questions, have watched developments in the American educational system closely over the years and are concerned that instituting certain Western concepts in Japan will lead to a distinct lowering of educational standards. "The American system is very good in letting the cream rise to the top," notes one official, "but in the process it neglects the average student," implying that the quality of education for most American students is below par. He adds that the Japanese system has produced uniformly high levels of education, but the excellent student is constrained. The challenge facing Japan is to combine the best of both: high educational standards for the majority and success for outstanding individuals -- preserving Japanese notions of equality and fairness at the same time.

Another conflict inherent in the educational reform issue is that Japan is a very class-conscious society. The language's multiple grammatical forms reflect distinct degrees of inferior and superior relationships. Such emotions are so deeply rooted that change will be difficult at best. Furthermore, there is a great premium on making it to the top, and the hope of reaching that level is enough for many to argue against any significant alteration of the system. Cynics also note that first-ranked educational instutions, their graduates and the interests that thrive under the current system -- such as publishing companies that enrich themselves through sales of study guides for entrance examinations -- all have vested interests in the present system, posing considerable obstacles to reform.

Political opposition may also prove insurmountable. The two strongest opponents to educational reform are the leftist political parties and Nikkyoso. Nikkyoso is concerned about government control over educators' prerogatives and dislikes being made the scapegoat for the ills of the current system. The union's leaders have endorsed reform in principle, provided it is supported by what the union calls a "true national consensus," but balks at supporting the Nakasone-backed commission or its recommendations lest it include proposals that could be used to justify hiring or firing particular teachers -- or even to break the union. Fear of government-imposed standards for employment are often cited by the union as grounds for its resistance to reform.

Nikkyoso's relations with the government -- both central and local authorities -- have been confrontational, and occasionally violent. Union members have routinely objected to even the most trivial matters. Attempts are frequently made to physically prevent candidates for school principal from taking annual qualifying examinations, for example. The union's greatest strength lies in a limited number of politically sensitive prefectures, which tends to concentrate its influence rather than dilute it. Coupled with political support from the Japan Socialist Party and the real concerns of average voters over such issues as returning to pre-war attitudes, the union poses a credible political force that could block reform suggestions altogether, regardless of their potential benefits.

The Future

Few concrete recommendations have been offered thus far. If past experience is any guide, however, it is likely that at least some of the following points will enter into the discussion:

- More diversity and differing identity among universities. A major criticism of the university system in Japan is that despite the number of higher learning institutions, there is little diversity in their offerings. Japanese and foreign critics alike have suggested that universities, particularly the private institutions, should cultivate unique identities, such as, for example, Massachusetts Institute of Technology. Greater diversity, they argue, would enhance the competition for promising students while raising overall educational standards at the college level.

- Emphasis on the role of research in education, particularly at the university level.

- Decentralization of the educational process, from selection of textbooks to development of curricula. (Education Ministry officials might argue instead for still greater centralization.)

- Elimination of the disparities between public and private schools. Public schools are far less expensive than private institutions but because of their origins generally are regarded as far superior in quality to private institutions. Denied opportunities to enter the public schools, the children of growing numbers of Japanese are forced to pay for more expensive, but less useful educations.

- Establishment of a universal college entrance examination system, including standardized tests and multiple applications. Elimination or modification of entrance examinations for primary schools.

- Curriculum revisions to reflect a greater emphasis on the humanities. (Some would argue for more emphasis on the sciences, but the key point here is that the consensus is toward continuous revision to reflect anticipated changes in society.)

- Intensified, practical foreign language training. Most Japanese students study English as an elective from junior high school through college, but leave the educational system with a stiff, formal understanding of the language at best. Although many American educators would be impressed by even this level of foreign language training, Prime Minister Nakasone and others feel that for Japan to become a truly international society higher standards must be attained.

- Added prestige for the role of vocational education linked to the possibility of reducing the college enrollment -- both to assure the quality of higher education and to remove the stigma that attaches to non-degree holders.
- Expanded enrollment at the top universities to make elite education more available to average but promising students.
- Additional funding for schools at all levels.
- Expansion of graduate education. Many Japanese educators believe that the U.S. higher education system is one of its greatest strengths. Graduate programs help enhance skills and provide much of the economy's resiliance. Athough numbers do not necessarily equate with quality, more than one million students were enrolled in 1982 in the U.S. graduate programs, compared with only 61,000 in Japan in 1983.

The Future of Reform

Nothing may come of the present reform fever, but the fact that Japan is seriously examining these issues suggests that the country does mean to restructure the system to enable it to remain a viable economic and political presence in the coming century, not simply the next decade. It also reflects what many outside observers consider to be Japan's greatest strength: a will to examine issues with a long-term perspective.

The education reform drive could have a significant impact in unexpected areas. An American defense specialist who is an astute observer of the Japanese scene notes that any effort to improve education ultimately will have a major effect on Japan's security. With a small military force that is incapable of withstanding a significant challenge, the country's Self-Defense Forces will be forced to rely increasingly on sophisticated intelligence and automated defense systems to assure security interests in the region. Such systems will require increasingly analytical, anticipatory and reactive capabilities far beyond those now in demand. Japan's success in assuring its security, he concludes, will hinge in large part on the educational system's success in providing individuals with those abilities.

Contrary to the view of many American observers, however, the reform drive will not lead -- at least consciously -- to a more Westernized Japan. Indeed, this is a conservative revolution aimed at preventing just that. It is, in the extreme, the West that many in Japan feel is responsible for the perceived laziness and selfishness in Japanese youth today. Educators admire the individuality generated by the U.S. school system, but hope to confine it to academic achievement and prevent its becoming a personal lifestyle for Japanese students.

One implication of this approach may be that some policymakers, including the prime minister, view these values as intrinsically weaker than the traditional Japanese ones. This has potent implications, particularly when concerns over a return to the 1930s come into play. But the important point is that many in Japan are very sincere in their conviction and belief that education is the key to remaining a viable, self-contained force in the future, and are equally serious about achieving that goal. United States, take note.

For further information, contact Michael W. Chinworth.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Table 1: Schools and Enrollment, 1983

	Number of Institutions	Teachers (thousands)	Students (thousands)
Total	58,499	1,267.7	26,709.8
Universities	458	109.1	1,834.5
National	96	50.6	435.5
Public	34	6.0	53.5
Private	328	52.5	1,345.5
Junior colleges	532	17.2	379.4
Professional schools	62	3.8	47.2
Senior high schools	5,368	252.6	4,715.2
National/public	4,097	196.1	3,399.5
Private	1,271	56.5	1,315.7
Junior high	10,950	273.7	5,706.8
Primary	25,044	474.0	11,739.5
Kindergartens	15,190	99.8	2,192.9
Others	895	37.5	94.5

Table 2: Rates of Advancement

	From Lower Secondary		From Upper Secondary		
			To College		To Workforce
	To Upper Secondary	To Workforce	Male	Female	
1950	42.5%	45.2%	34.6%	17.2%	44.9%
1960	57.7	38.6	19.7	14.2	61.3
1965	70.7	26.5	30.1	20.4	60.4
1970	82.1	16.3	25.0	23.5	58.2
1975	91.9	5.9	33.8	34.6	44.6
1980	94.2	3.9	30.3	33.5	42.9
1983	94.0	3.9	27.7	32.4	41.5

Source: Japan Statistical Yearbook, 1984

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The White House Fall Offensive Continues

"We have made it clear that we are not kidding - no more Mr. Nice Guy," declared Vice President George Bush September 11 before a San Francisco audience. But whether the administration's continuing campaign to talk tough on trade and wrest control of the issue from Congress will succeed remains an open question. While the White House has attempted to fight the good fight against Democratic momentum on trade, it has not convinced once-loyal Hill Republicans that its actions will defuse the politically explosive issue.

Following the September 7 announcement that the president would initiate investigations of unfair trade practices concerning Japan, Korea, Brazil and

It may have been this last element that led the party to retain the disputed limit. Many Diet members apparently felt that dropping the one percent cap while elevating defense plans would generate serious opposition, particularly from the Japan Socialist Party, and could lead to a vote of no-confidence that would have considerable support -- even from some in the LDP. The opposition of former prime ministers Suzuki, Miki and Fukuda was also a key consideration in party policy sessions. The prime minister, who is intent upon securing a third term as party president and prime minister in December 1986, apparently did not want to risk dissolving the government by pressing the issue.

In typical Japanese fashion, it is not entirely clear that the one percent limit has in fact been formally retained. Some analysts have pointed to comments that the limit will be in effect "for the time being" as evidence that it will ultimately be stretched to accommodate higher spending and will serve more as a general guideline rather than a strict limitation. Washington apparently disagrees with this interpretation. Under Secretary of State Michael Armacost came very close to criticizing the Japanese decision when he noted that the United States hopes its allies -- specifically Japan -- will assume a greater share of the defense burden in light of the primary role the United States is playing in terms of allied defense. He also implied that the decision to retain spending limits will impede the government's progress in meeting the goal of defending its sealanes to a distance of 1,000 miles. The comments were viewed by Japanese analysts as the most critical defense-related statement from the Reagan administration in recent memory. Officially, the administration has maintained a stance that Japan alone should be responsible for making decisions regarding its defense.

Japanese press reports also suggest that the cabinet now will make a formal decision regarding participation in the Reagan administration's Strategic Defense Initiative. The two governments are nearing agreement on a transfer of Japanese military technology expected to be applied in the SDI project, but the Nakasone cabinet has not yet responded to last spring's DOD letter urging allied support of the R&D program. Under the influence of Foreign Minister Shintaro Abe, the government has taken a cautious stance, testing the political waters and gauging other allied responses before making a formal commitment to participate in the project. Some U.S. observers, noting the less than enthusiastic response of several American allies, have suggested that Japan will take a similar position, adding that the bilateral technology transfer agreement facilitates Japan's contributing to the program without formally participating. Others have noted that the rumored inclusion of Great Britain and West Germany will sway Japan to accept formal participation. A decision is said to be expected by mid-October.

Michael W. Chinworth

Japan Considers South African Sanctions

The Japanese government is reacting cautiously to the issue of levying additional sanctions against the government of South Africa, unwilling to jeopardize the country's economic interests but fearful of being branded a supporter of the apartheid regime. Most Japanese observers agree that for the moment, Japan will remain unaffected by recent developments, including Pretoria's decision to delay repayment of certain loans, but the issue could become more complex if it appears that Japan is benefiting from American-imposed constraints on South Africa's economic activities.

In terms of total trade value, South Africa is not an important element of Japan's overall trade. Two-way transactions in 1984 totaled just over $3.4 billion, an increase of 3.6 percent over 1983. Total trade for the first half of 1985 has dropped to $1.4 billion from 1984's first-half figure of $1.8 billion. Japan's exports are running at half the level of the previous year, although imports from South Africa accelerated sharply from March to May of this year compared to year-earlier figures -- perhaps reflecting Japan's concern over economic and political conditions.

Non-electric machinery dominates Japan's exports to South Africa, while raw materials constitute the bulk of its imports. Japan depends heavily on South African exports of certain rare metals, particularly rhodium, which is used in manufacturing catalytic converters for automobiles. According to Nihon Keizai Shimbun, Japanese auto executives are confident that supplies of the metal will remain sufficient for the near future, and producers are shifting to other types of converters that do not require rhodium. Japan's dependence on other South African ores is considerable. The country provides 42 percent of Japan's platinum, half its manganese, 47 percent of its anthracite coal and 42 percent of its chrome. The September 1 miners' strike, involving thousands of South African workers, could ultimately have an impact on supplies in these areas, but industry sources insist that for the moment there is no reason to panic.

Japan's Trade with South Africa, 1980-1985

(in millions of dollars; percentage of total in parentheses)

Year	Exports	Imports	Balance
1980	$1,800.3 (1.4%)	$1,740.9 (1.2%)	$59.4
1981	2,222.0 (1.5)	1,728.3 (1.2)	493.7
1982	1,654.7 (1.2)	1,840.2 (1.4)	-185.5
1983	1,738.0 (1.2)	1,587.3 (1.3)	150.7
1984	1,839.9 (1.1)	1,610.6 (1.2)	229.3
1984 (1st half)	989.3 (1.2)	792.4 (1.1)	196.9
1985 (1st half)	493.8 (0.6)	891.1 (1.4)	-397.3

Source: Japan Tariff Association

Finance officials also are putting on confident exteriors, noting that the Japanese government has made no direct loans to Pretoria and that if South

Africa is to qualify for additional private sector financing, it will be forced to reach payment terms with individual companies, thus suggesting that the private sector is in no danger of over-extending itself in South Africa.

These considerations, however, may prove to be far less important than the political issues at stake. Foreign Minister Shintaro Abe has indicated that the government is prepared to discuss the question of sanctions with the United States. Although no specific date has been set, it is likely that such talks will take place in the near future, perhaps as early as mid-October. Japan has honored sanctions against South Africa in the past, including United Nations and U.S. boycotts on exports of certain products, but it is unclear what stance the government will assume in the upcoming discussions. Given the growing international pressure on South Africa and the unpopularity of the apartheid policy within Japan, however, it is reasonable to assume that Mr. Abe will be inclined to follow a path consistent with international positions on the issue. Japan has been relatively supportive of U.S. policy initiatives in other areas of the continent, particularly Angolan issues, and has accelerated assistance to the drought-stricken areas of the equatorial nations. Furthermore, it would be severely damaging politically for Japan to appear to profit from the sanctions, given international criticism of Tokyo's trade policies at this time. Still, Japan's reliance on certain South African metal and coal supplies may complicate the picture.

Michael W. Chinworth

Japan-Taiwan Trade

Taiwan was Japan's sixth-largest export market in 1984, purchasing almost $6 billion worth of goods. Shipments were about 40 percent higher than in 1982, when Taiwan banned imports of more than 1,500 Japanese consumer products to protest its chronic trade deficit with Tokyo. This increase, however, was overshadowed by a rise in Japan's exports to the People's Republic of China in 1984. Moreover, during the first six months of 1985, deliveries to the PRC were double those in the year-earlier period, while exports to Taiwan during this time declined 16 percent.

Japan's Trade with Taiwan and the People's Republic of China

(in millions of dollars)

	1982	1983	1984	January-June 1984	January-June 1985
Exports					
Taiwan	$4,255	$5,086	$5,986	$2,966	$2,481
People's Republic of China	3,511	4,912	7,217	2,886	6,000
Imports					
Taiwan	2,443	2,622	3,204	1,647	1,641
People's Republic of China	5,352	5,087	5,958	2,953	3,160

Source: Japan Tariff Association

With a 10 percent share, Japan remains Taiwan's second-largest trading partner after the United States, which takes almost one-half of the island's exports. Foreign trade, an important factor in Taiwan's rapid growth, has been expanding more slowly in 1985. Total exports, which gained 21.3 percent in 1984, increased only 1 percent in the first six months of this year as exports to the United States fell and shipments to Japan remained flat. Taiwan's exports to Hong Kong, however, increased 37 percent during the first half of 1985. Trade analysts believe that most of those goods were bound for the PRC. Indirect trade between Taiwan and the PRC is expected to top $1 billion in 1985.

In May, Taipei approved Nissan's bid to buy a 25 percent equity share of Yue Loong Motor Co., Taiwan's largest car manufacturer. The decision to waive the rule against direct stock purchases by foreign investors may encourage more foreign investment. The agreement gives Nissan a direct foothold in Taiwan's growing car market, where imports of Japanese cars are forbidden because of Taipei's trade deficit with Tokyo. The agreement follows the collapse of two years of negotiations between Toyota and Taipei over Toyota's proposal to build a large plant capable of producing 300,000 cars annually. The two sides failed to agree on export and local content requirements.

Randall S. Jones

Corporate Earnings In Japan Expected To Decline

According to two private research institutes in Japan, corporate earnings in FY 1985 will decline for the first time in three years. Wako Research Institute of Economics expects pre-tax corporate earnings to decline 4.1 percent in the current fiscal year, while Nikko Research Center predicts a 1.3 percent fall. Both forecasts are in sharp contrast to their June estimates of a 4 to 5 percent increase in the fiscal year that ends March 31, 1985. Despite the expected decline in earnings, the surveys, which exclude banks and insurance companies, anticipate a 3 to 5 percent increase in sales.

Sluggish exports of steel and semiconductors are the major cause of the growing pessimism. Nikko expects the earnings of the steel and electrical industries to decline by 16 percent. The slump in semiconductors will affect related industries, including chemicals, ceramics and nonferrous metals.

There are some bright spots, however. According to Wako, the auto industry will register strong earnings gains as a result of brisk exports, while stable commodity prices will lead to higher earnings in the food industry. The non-manufacturing sector, led by construction and real estate, will show a second consecutive yearly increase in profits, Nikko analysts report.

The economy appears to be growing more slowly than the 5.7 percent rate of real growth in FY 1984. In addition to the expected decline in corporate earnings, investment is expected to increase less than during the previous fiscal year. Government and most private forecasters are predicting that the economy will grow 4.6 percent in real terms in FY 1985.

Randall S. Jones

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REPORT

NO. 37A September 27, 1985

1985 UPDATE ON JAPAN'S ENERGY PROFILE: CONSERVATION

Summary

Japan continued to moderate its appetite for energy in fiscal 1984 (ended March 31, 1985) while still recording a solid 5.7 percent in real economic growth. The country's dependence on imported oil was the lowest in almost 20 years, dropping below 60 percent. According to the Ministry of International Trade and Industry, this reflects both conservation programs and efforts to develop alternative energy sources. A review of Japan's alternative energy programs appeared in last year's energy report (JEI Report No. 28A, July 20, 1984). In this analysis, the spotlight shifts to the country's conservation programs.

The Aggregate Picture

Japan's consumption of all types of energy climbed just 2.8 percent in fiscal 1984 -- the equivalent of 406 million kiloliters of crude oil -- according to MITI data. This performance represents a significant slowing in the rate of growth of consumption, which moved from -4.8 percent in FY 1982 to 5.3 percent in fiscal 1983. On the supply side, strong growth continued for the second year in a row, with supplies of all energy resources growing 5.3 percent to the equivalent of 436 million kiloliters of crude oil, slightly less than the 6.6 percent growth recorded in FY 1983. Although the wider gap between supplies and consumption implies a buildup of inventories, this did not occur because non-oil energy sources accounted for most of the growth in supply.

A breakdown by source clearly reveals the shift away from imported oil. Increased oil imports made the smallest contribution to the expansion of

Japan's energy supply (see Table 1). The tiny 1.4 percent increase gave oil just a 59.6 percent share of total supplies, compared with 77 percent in 1973. Soaring purchases of natural gas and coal, however, tended to partially offset oil's decline since they too are mostly imported. The sharp decline in hydroelectric output was largely a result of the drought that struck Japan. Finally, nuclear energy appears to be fulfilling its promise as a major energy resource. Nuclear plants reported record-high operating rates in fiscal 1984, helping utilities to score good profits.

Table 1: Japan's Energy Suppply By Source

(in millions of units)

	FY 1983			FY 1984			
	Actual	Crude Oil Equivalent	Share	Actual	Crude Oil Equivalent	Share	Percent Change
Oil (kl)	256.0	256.0	61.9%	259.6	259.6	59.6%	1.4%
Coal (mt)	96.5	73.3	17.7	106.2	80.5	18.5	9.9
Nuclear (kw)	18.5	29.8	7.2	20.7	35.0	8.0	17.5
Natural Gas (kl)	31.2	32.1	7.5	40.0	40.0	9.2	28.0
Hydroelectric (kw)	33.5	22.2	5.4	33.9	19.1	4.4	-14.0
Alternatives (kl)	1.4	1.4	0.3	1.5	1.5	0.4	7.1
Total		414.0	100.0		435.8	100.0	5.3

Source: Ministry of International Trade and Industry

Aggregate consumption statistics reinforce this picture (see Table 2). Oil consumption increased only slightly overall, based on small gains in demand from the industrial and transportation sectors and a significant drop in other uses. In contrast, all other sources racked up 5 percent or higher growth. Another important trend is the 11.5 percent increase in industry's use of propane. Although propane, or what the Japanese call "city gas," supplies only a small part of industry's needs, it is often used in highly efficient co-generation systems -- systems which are gaining more attention from industrialists.

Combined with figures on real gross national product growth, the data on aggregate consumption confirm the upward trend of energy efficiency. In fiscal 1983, the economy consumed 5.3 percent more energy while growing 3.9 percent; the figures for fiscal 1984 were 2.8 percent and 5.7 percent, respectively. Tokyo expects this trend to level out in the future, predicting average annual economic growth of 3 to 5 percent coupled with energy consumption growth of 2 to 3 percent.

Finer Details

A close look at the different energy sources reveals other important trends. The oil industry experienced a relatively good year despite declining

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demand. Refineries ran at an average 67.1 percent of capacity, up over 10 points from the previous two years (see Table 3), while inventories were still reduced significantly. The slump in imported crude oil prices that would have helped brighten oil company balance sheets was partially offset by the soaring value of the dollar (see Table 4). Petroleum refiners were not actually harmed by the weaker yen since they cover any exposure through foreign exchange transactions, but they could not take advantage of the situation either.

Table 2: Japan's Energy Consumption By Source, FY 1984

(in millions of kiloliters of crude oil equivalent and percentage change)

	Industry	Transportation	Other	Total
Oil	85.1 (1.1%)	62.1 (1.8%)	34.1 (-5.0%)	181.2 (0.1%)
Coal	56.1 (5.9)	0	0.4 (-12.8)	56.5 (5.8)
Electricity	80.9 (5.3)	3.4 (-1.4)	59.4 (4.9)	143.7 (5.0)
Propane	2.8 (11.5)	0	9.9 (3.2)	12.7 (5.0)
Others	11.0 (4.7)	0.3 (3.2)	1.0 (9.8)	12.3 (5.0)
Total	235.8 (3.9)	65.8 (1.6)	104.8 (1.2)	406.4 (2.8)

Source: Ministry of International Trade and Industry

The picture for non-crude energy imports was brighter as demand rose across the board (see Tables 5 and 6). Coal imports from new mines in Canada and Australia jumped along with consumption. Purchases of naphtha from foreign suppliers was flat, mainly because importers had overbought in 1983. MITI's efforts to reduce use of heavy fuel oil are having a major impact: consumption by industry and utilities continued to fall in 1984 even as industrial output rose dramatically. With gasoline prices stable during 1984, the demand for liquefied petroleum gas for car fuel made little progress. The resurgence of the petrochemical industry, however, more than made up the difference. Detailed figures on natural gas consumption show strong gains in both residential and industrial uses.

A detailed review of Japan's electric power industry indicates further progress toward weaning the country from dependence on imported oil (see Tables 7 and 8). In order to compensate for hydroelectric power's sharply lower output, generation by oil- and coal-fired as well as nuclear plants was increased. Yet the fact that nuclear power supplied the larger part of the increase shows the strength of Japan's nuclear program. The nuclear trend is likely to accelerate as Japanese utilities bring more than 30 planned nuclear facilities on line and continue their progress toward fast-breeder reactors and fusion reactors.

In terms of consumption, it is clear that industry is making good use of the nuclear bounty. Electricity used for power continues to rise strongly with much of the impetus coming from the manufacturing sector. MITI planners foresee even greater use of electricity since it can be generated from numerous sources.

End-Users: Households

A brief look at household energy needs uncovers one area where conservation efforts are needed. Residential consumption of all types of energy in 1984 showed strong increases across the board (see Table 9). Although a cold winter and hot summer inflated the figures to some degree, it appears that the Japanese consumer is stocking his home with more appliances and is more extravagant when it comes to heating and cooling. While energy-efficient appliances are the norm in Japan today, energy-efficient structures are not. In contrast to the successful U.S. program, Tokyo does not offer homeowners tax incentives to construct energy-wise homes or install better insulation. While some provisions are made for installing solar powered systems, policy remains weak in this area.

End-Users: Industry

Industry accounted for 58 percent of all energy consumed in Japan in fiscal 1984, up slightly from FY 1983's 57.4 percent level. In terms of percentage change, however, industry's needs grew 3.9 percent in FY 1984 compared with FY 1983's 4.2 percent increase. As seen in Table 2, this sector's appetite for every type of energy grew. At the same time, the balance continued to shift against oil in terms of energy sources.

The trend away from oil is clearer when consumption by type of energy is examined (Table 10). The use of gasoline, light and heavy oils declined in almost every sector when 1983 and 1984 are compared. Consequently, the use of other energy sources has expanded, particularly electricity and propane. Since government and business planners see the current global oil surplus as a temporary condition, the drive to squeeze oil's role will continue.

MITI data confirm that industry continues to improve its energy efficiency. When the mining and manufacturing output and energy demand indices are compared, it appears that Japan improved its energy efficiency by 24 percent from fiscal 1979 to fiscal 1984 (Table 11). Between FY 1979 and FY 1982, the improvement resulted from falling energy inputs combined with steady output. Beginning in FY 1983, energy consumption and production both began to climb, but the latter far outpaced the former, driving the output/energy index further down. The trend has apparently started to level off -- 1984's improvement was the smallest in six years.

Furthermore, MITI asserts that the FY 1984 increase in energy consumption by industry due to rising production would have been much greater had it not been for improvements in equipment and management (Table 12). Although the effect of production changes has varied widely over the past five years, savings from conservation and industrial reorganization have had a major restraining influence.

Commercial Conservation

Industrial conservation programs extend far beyond the quantitative reduction of energy needed to produce goods. More efficient white-collar operations, improved methods of generating energy, and energy-efficient products have received at least equal attention.

Many companies have had electricity conservation programs in place for over a decade. More efficient lighting and heating coupled with reduced use yielded immediate savings. Further gains at a much higher cost are now being put into effect: improved wiring and insulation, passive solar architectural designs, and computer-controlled environmental systems (so called "smart office buildings") will continue to reduce consumption.

Among the more promising technologies to augment energy production are high efficiency coal burning systems, bioconversion systems and co-generation, which focuses on the productive use of waste heat. Liquefaction, fluidized-bed furnaces and a number of other innovations are being employed to wring more energy from coal with less pollution. These systems are particularly important to the steel industry, which needs every bit of help to stay internationally competitive. Converting refuse into methanol is the focus of several programs (see Table 13) aimed at utilization by factories and motor vehicles.

Many companies are making a concerted effort to adapt co-generation to their particular needs. This technology offers significant paybacks. Petrochemical, glass, ceramic, steel and other companies produce large amounts of waste heat that can be harnessed to drive electric generators. Conversely, companies that have boiler generators can install heat transfer systems to recapture much of the energy that would be lost out the chimney.

Energy-efficient industrial products are now in widespread use; MITI actually fosters the development of such products by holding annual contests. (The FY 1984 winners are listed in Table 14.) Despite the recent stability of energy prices, companies show no signs of easing their efforts to develop power-saving products and promote them as such.

Conclusion

Japan's drive to reduce the economy's energy requirements have been quite successful. The 1970's oil crises sent shocks throughout the world that are still reverberating strongly in Japan. What has been most impressive is the country's ability to combine a smaller energy appetite with enviable economic performance in terms of output, employment and price stability.

Changing conditions, however, are presenting policymakers with new problems. The global excess of refining capacity has put new pressure on Japan to reorganize its tightly controlled domestic petroleum products market. Bowing to the recent consensus of the International Energy Agency, an advisory council has recommended that Japan liberalize its refined products import policy. The move will surely be opposed by Japanese oil refiners and will undoubtedly give MITI planners headaches for the next few years. Liberalization could yield significant benefits to Japanese consumers in the form of lower prices on certain products, and to Japanese politicians in the form of increased import figures. It could also increase Japan's vulnerability to world oil market fluctuations, reversing the trend toward reduced dependence on imported oil. Regardless of MITI's decision, changes in the country's energy supply structure will come slowly.

It is clear that the private sector has taken the lead in conservation, while the government has focused more attention on developing alternative energy sources. The drive to establish knowledge-intensive industries as the core of Japan's economy is spurring public and private efforts in areas such as structural ceramics and plastics, bioconversion and high energy physics (fusion) -- all areas which promise significant gains in energy efficiency. Despite a host of uncertainties, conservation will remain a keystone of Japan's energy policies.

For further information, contact Jon Choy.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Table 3: Japan's Crude Oil Imports, Production and Inventories

(in thousands of barrels)

	Production	Imports	Throughput	Rate of Operation	Inventories
1980	3,177	1,615,480	1,462,123	67.3%	238,020
1981	2,868	1,448,203	1,321,353	60.9	226,302
1982	2,937	1,350,369	1,225,566	56.5	205,916
1983	3,095	1,307,024	1,181,136	56.9	185,870
1984	2,994	1,349,847	1,220,958	67.1	163,905
January	264	114,055	114,460	74.3	174,637
February	239	122,711	118,277	82.0	158,677
March	247	134,152	117,407	76.2	162,967
April	229	118,231	110,791	74.3	159,483
May	257	113,967	99,129	64.3	166,235
June	236	98,624	85,749	57.5	169,723
July	226	108,383	94,042	61.0	173,541
August	214	150,583	96,602	62.7	215,936
September	245	73,637	81,562	54.7	193,795
October	258	103,458	97,640	63.3	185,341
November	277	96,394	99,998	67.0	165,597
December	302	115,654	105,295	68.3	163,905
1985					
January	308	120,265	106,597	69.1	168,207
February	296	116,214	106,408	76.4	168,528
March	308	123,800	102,955	66.8	182,177

Source: Petroleum Association of Japan

Table 4: Price (c.i.f.) of Imported Crude Oil

	Volume (1,000 bbl)	Value ($millions)	Dollars per bbl	Yen per kiloliter
1980	1,600,352	$52,749	$32.97	Y47,197
1981	1,430,623	53,343	37.29	51,387
1982	1,334,958	46,266	34.66	53,906
1983	1,302,055	40,063	30.77	45,923
1984	1,314,034	39,379	29.36	43,713
January	111,314	3,283	29.49	43,374
February	118,950	3,518	29.58	43,532
March	137,386	4,053	29.50	42,454
April	109,069	3,191	29.26	41,426
May	120,441	3,554	29.51	42,224
June	92,897	2,751	29.61	43,127
July	108,622	3,202	29.48	44,262
August	126,146	3,701	29.34	44,969
September	90,614	2,650	29.24	44,698
October	105,540	3,080	29.17	45,267
November	104,684	3,051	29.15	44,748
December	115,371	3,346	29.00	44,892
1985				
January	99,017	2,881	29.10	46,128
February	113,471	3,258	28.71	46,352
March	126,586	3,583	28.30	46,379

Source: Ministry of Finance

Table 5: Japan's Non-Crude Energy Imports

(in thousands of units)

	Coal (mt)	Naphtha (kl)	Fuel Oil (kl)	LPG (mt)	LNG (mt)
1980	68,570	7,363	7,431	9,725	16,324
1981	77,959	7,241	7,404	10,097	16,833
1982	78,535	8,998	6,893	11,861	17,480
1983	75,124	13,096	7,285	10,860	18,748
1984	87,227	13,414	7,342	11,320	25,738
January	6,584	1,347	565	1,066	2,181
February	6,571	1,390	602	773	1,954
March	7,415	727	499	894	2,279
April	7,629	918	807	1,053	1,820
May	7,071	1,113	573	1,119	2,043
June	8,052	970	512	830	1,795
July	7,445	913	705	1,071	2,196
August	7,581	1,253	703	1,011	2,545
September	6,879	963	672	534	2,070
October	7,808	1,156	580	1,062	2,209
November	7,190	1,126	558	877	2,281
December	7,001	1,539	566	1,031	2,366
1985					
January	7,101	1,228	420	720	2,527
February	6,718	1,365	440	946	2,160
March	8,216	1,463	678	1,086	2,556

Table 6: Japan's Consumption of Non-Crude Oil Energy

(in thousands of units)

	Coal (mt)			Heavy Fuel Oil (kl)				LPG (mt)			LNG (mt)	
	Coke	Steel	Power	Agri-culture	Manuf-turing	Ship-ping	Power	Chemi-cals	Power	Motor vehicles	Resi-dential	Power
1980	2,859	58,896	1,671	6,433	43,747	6,154	38,360	4,485	3,327	1,548	3,180	12,554
1981	3,906	60,854	4,082	6,444	35,690	4,730	34,508	4,465	2,707	1,241	3,411	12,857
1982	3,389	59,447	5,233	6,323	30,209	4,365	30,983	4,465	2,707	1,241	3,411	12,857
1983	3,652	54,570	7,742	5,707	27,769	4,112	29,476	4,047	3,082	1,822	4,195	14,039
1984	4,069	62,716	9,424	6,086	26,655	4,909	29,220	5,029	3,381	1,843	5,561	19,606
January	339	4,634	801	613	2,408	396	2,905	403	240	129	678	1,445
February	295	4,775	723	587	2,589	414	3,150	414	290	149	534	1,363
March	386	5,592	685	562	2,531	469	3,045	397	299	168	572	1,650
April	413	5,582	706	445	2,227	400	2,049	398	288	146	426	1,337
May	336	5,372	660	551	2,084	392	1,740	353	270	166	410	1,633
June	261	5,866	694	463	2,094	397	2,080	383	288	163	369	1,369
July	236	5,008	1,138	470	2,094	396	2,616	426	258	154	378	1,761
August	486	5,370	775	493	2,003	411	2,816	488	252	126	400	2,088
September	195	5,004	905	468	2,107	391	2,565	460	272	144	445	1,568
October	447	5,606	776	479	1,902	403	1,992	409	300	171	392	1,760
November	408	5,084	778	440	2,203	388	2,079	438	288	145	577	1,647
December	267	4,824	782	515	2,413	452	2,183	460	336	182	507	1,859
1985												
January	327	4,549	1,221	558	2,445	384	2,308	454	268	135	572	1,898
February	349	4,819	918	502	2,340	419	2,367	397	272	117	441	1,661
March	422	5,694	982	491	2,504	431	2,053	373	299	160	648	1,851

Source: Ministry of International Trade and Industry

Table 7: Japan's Electric Utility Output

(in billions of kilowatt hours)

	Total	Hydro	Thermal	Nuclear
1980	514.05	85.15	346.90	82.01
1981	523.14	83.74	352.18	87.23
1982	522.48	77.34	343.30	101.84
1983	555.49	81.39	360.98	113.12
1984	580.41	68.87	378.32	133.23
January	47.89	4.38	33.65	9.85
February	47.95	3.62	34.95	9.38
March	49.41	3.98	36.87	8.56
April	43.63	7.38	27.47	8.78
May	43.36	7.56	25.03	10.77
June	45.94	7.76	28.15	10.02
July	54.49	8.52	35.46	10.51
August	56.35	6.89	38.34	11.12
September	47.50	4.93	31.24	11.33
October	46.32	3.56	31.07	11.68
November	46.22	3.35	31.10	11.77
December	50.07	3.89	34.02	12.16
1985				
January	50.06	3.55	34.29	12.22
February	46.74	4.06	32.11	10.57
March	49.75	7.41	30.04	12.30

Table 8: Japan's Electricity Consumption

(in billions of kilowatt hours)

			Power				
				Manufacturing			
	Total	Light	Total	Total	Chemicals	Steel	Rail-Roads
1980	464.25	105.27	353.98	190.77	26.79	61.80	12.71
1981	470.56	110.30	360.27	184.29	26.28	58.49	12.86
1982	471.44	112.79	358.65	177.95	29.22	53.69	13.06
1983	499.78	122.22	377.57	182.62	27.55	55.47	13.33
1984	524.53	127.51	397.02	191.97	28.76	57.04	13.13
January	43.87	12.17	31.71	14.87	2.29	4.65	1.23
February	43.65	11.43	32.22	15.24	2.23	4.64	1.13
March	43.34	10.68	32.66	16.03	2.32	4.87	1.19
April	42.12	10.64	31.48	15.33	2.31	4.67	1.03
May	40.30	9.49	30.80	15.70	2.42	4.79	1.03
June	40.83	8.85	31.98	16.25	2.47	4.79	1.02
July	44.60	9.75	34.85	16.58	2.44	4.75	1.13
August	49.41	12.31	37.10	15.77	2.43	4.54	1.19
September	47.77	11.89	35.87	16.10	2.41	4.62	1.03
October	42.19	9.37	32.82	16.62	2.48	4.94	1.07
November	41.40	9.78	31.62	16.20	2.41	4.84	1.07
December	42.81	10.54	32.27	16.18	2.43	4.91	1.12
1985							
January	45.97	12.84	33.14	15.48	2.39	4.72	1.22
February	43.82	11.50	32.32	15.33	2.22	4.55	1.05
March	43.32	10.54	32.78	16.42	2.35	4.92	1.15

Source: Ministry of International Trade and Industry.

Table 9: Household Energy Consumption

	Electricity (mil kwh)	Propane (bil kcal)	Kerosene (1,000 kl)	LPG (1,000 mt)	Other Solids (1,000 mt)	Coal (1,000 mt)
1980	103,199	56,008	16,725	4,984	1,212.3	578.5
1981	108,979	58,178	16,730	5,336	970.0	472.5
1982	110,051	58,200	15,275	5,295	1,173.0	512.8
1983	117,905	60,748	15,928	5,460	1,010.3	509.2
1984	125,588	66,065	17,130	5,696	1,413.2	469.1
January	12,071	8,087	2,774	594	95.1	34.9
February	11,324	7,890	2,911	671	108.9	40.3
March	10,586	7,834	2,509	610	110.2	38.4
April	10,545	7,223	1,119	485	90.2	19.3
May	9,407	5,783	695	464	103.4	26.3
June	8,749	4,242	491	403	111.0	34.5
July	9,620	3,755	443	378	107.8	36.4
August	12,169	3,147	616	303	119.0	33.6
September	11,760	3,047	482	338	150.3	44.7
October	9,243	3,699	822	414	136.9	62.5
November	9,676	4,976	1,488	438	139.2	52.8
December	10,438	6,380	2,781	600	141.2	45.4
1985						
January	12,741	8,257	2,670	602	125.5	26.0
February	11,392	7,678	2,312	554	94.6*	32.5
March	10,447	7,253	n.a.	n.a.	104.7*	42.4

*Partial data only.

Source: Ministry of International Trade and Industry

Table 10: Energy Consumption by Industry by Type

	Total oil equiv. (kl)	Fuels (kl)	Electricity (1,000 kwh)	Steam (mt)	Gasoline (kl)	Light Oil (kl)	Fuel Oil (kl)	LPG (mt)	Coal (mt)	Propane (1,000 cu m)
10a. Metal Mining										
1983	85,704	34,450	521,578	2,468	66	4,408	21,176	24	2,881	0
1st Qtr	22,906	9,961	134,324	842	11	882	6,820	6	279	0
2nd Qtr	18,658	6,329	123,158	541	20	903	3,490	6	712	0
3rd Qtr	20,235	7,433	128,826	412	17	959	3,967	6	896	0
4th Qtr	23,905	10,727	135,270	673	18	1,032	6,899	6	994	0
1984	73,995	25,839	491,902	1,914	63	4,482	12,871	29	2,778	0
1st Qtr	20,593	8,076	131,243	670	20	1,017	4,335	11	871	0
2nd Qtr	17,851	5,963	117,915	383	15	1,137	2,818	6	645	0
3rd Qtr	16,602	4,825	118,486	264	14	1,170	2,126	6	692	0
4th Qtr	18,949	6,975	124,258	597	14	1,158	3,592	6	570	0
1985										
1st Qtr	19,778	7,923	122,182	774	14	1,147	4,477	6	743	0
10b. Coal Mining										
1983	663,943	592,695	719,746	0	12	11,270	4,330	0	586,524	0
1st Qtr	158,457	135,970	207,052	0	3	2,551	1,904	0	125,598	0
2nd Qtr	148,778	130,730	185,087	0	3	2,468	913	0	127,183	0
3rd Qtr	158,848	145,532	171,694	0	3	3,116	1,088	0	142,790	0
4th Qtr	197,860	180,463	155,913	0	3	3,135	425	0	190,953	0
1984	657,159	596,539	633,417	0	12	21,067	2,178	0	592,447	0
1st Qtr	184,713	171,818	135,434	0	3	3,685	634	0	178,921	0
2nd Qtr	147,789	130,439	177,872	0	3	6,147	565	0	118,335	0
3rd Qtr	153,070	137,339	165,643	0	3	5,620	402	0	137,104	0
4th Qtr	171,587	156,943	154,468	0	3	5,615	577	0	158,087	0
1985										
1st Qtr	172,915	159,149	144,320	0	3	6,000	606	0	157,533	0
10c. Textiles										
1983	4,023,117	3,597,195	5,143,101	344,150	412	1,591	2,993,544	90,923	209,494	36,656
1st Qtr	1,047,271	928,678	1,155,105	118,900	103	383	786,915	21,980	47,144	7,429
2nd Qtr	908,597	865,374	1,322,380	83,139	101	383	724,768	22,044	44,327	10,109
3rd Qtr	1,021,717	885,257	1,347,885	70,731	105	380	743,773	22,262	47,190	9,302
4th Qtr	1,045,532	917,886	1,317,731	71,380	103	445	738,088	24,637	70,833	9,816
1984	4,213,267	3,680,691	5,332,631	303,292	390	1,646	2,887,151	110,703	282,458	39,972
1st Qtr	1,107,109	983,639	1,245,361	77,072	96	420	798,139	26,034	68,462	10,099
2nd Qtr	1,034,346	897,629	1,380,588	57,787	106	402	711,341	24,952	67,764	10,218
3rd Qtr	1,017,666	877,084	1,379,836	81,860	93	392	668,746	29,328	73,122	9,216
4th Qtr	1,054,146	922,339	1,326,846	86,573	95	432	708,925	30,389	73,110	10,439
1985										
1st Qtr	1,073,984	938,814	1,245,626	229,403	84	410	688,247	26,541	96,693	10,559

Table 10 - continued

	Total oil equiv. (kl)	Fuels (kl)	Electricity (1,000 kwh)	Steam (mt)	Gasoline (kl)	Light Oil (kl)	Fuel Oil (kl)	LPG (mt)	Coal (mt)	Propane (1,000 cu m)
10d. Pulp, Paper and Cardboard										
1983	10,480,791	9,337,339	11,570,067	590,881	477	1,808	4,705,871	39,491	971,472	15,358
1st Qtr	2,702,898	2,434,898	2,716,460	155,514	122	449	1,268,892	10,357	264,051	3,850
2nd Qtr	2,552,336	2,256,789	2,984,266	152,280	119	455	1,119,246	8,904	233,581	5,536
3rd Qtr	2,535,243	2,244,598	2,921,922	138,382	114	423	1,098,027	9,245	221,503	2,970
4th Qtr	2,690,314	2,401,054	2,947,419	144,705	122	481	1,219,706	10,985	252,337	3,002
1984	10,731,896	9,568,600	11,708,214	857,172	439	1,792	4,699,063	42,536	1,015,973	20,404
1st Qtr	2,774,319	2,501,497	2,742,982	213,908	114	507	1,282,060	11,266	272,822	4,753
2nd Qtr	2,628,898	2,327,426	3,009,592	248,166	106	446	1,130,126	10,485	244,032	5,228
3rd Qtr	2,574,194	2,282,280	2,942,548	201,712	108	402	1,084,223	9,694	222,912	4,729
4th Qtr	2,754,485	2,457,397	3,013,092	193,386	111	437	1,202,654	11,091	276,207	5,694
1985										
1st Qtr	2,803,522	2,525,093	2,798,383	221,911	112	438	1,225,479	11,294	298,596	6,972
10e. Chemicals										
1983	57,216,628	53,663,496	35,000,370	25,001,640	641	148,347	5,919,405	2,499,865	13,736,636	39,381
1st Qtr	14,318,711	13,088,243	6,762,101	5,658,974	164	16,418	1,541,886	678,369	3,244,622	9,902
2nd Qtr	13,653,886	12,595,987	9,154,360	5,153,172	156	60,198	1,425,456	501,075	3,451,977	9,404
3rd Qtr	14,876,064	13,611,299	9,341,328	5,377,255	154	37,934	1,489,988	632,404	3,533,950	8,725
4th Qtr	14,367,967	14,367,967	9,742,581	5,812,239	167	33,797	1,462,075	688,017	3,506,087	11,350
1984	66,206,821	60,967,640	40,109,747	21,720,660	640	87,052	5,879,700	3,049,413	23,061,710	42,166
1st Qtr	16,196,226	14,891,257	9,525,653	6,207,630	158	48,622	1,613,605	731,095	3,531,067	8,914
2nd Qtr	16,063,222	14,709,775	10,673,116	5,055,157	159	18,737	1,390,244	661,518	6,274,570	9,959
3rd Qtr	16,823,441	15,545,332	9,882,037	5,083,529	152	5,724	1,401,731	853,480	6,514,461	11,009
4th Qtr	17,123,932	15,821,276	10,028,941	5,374,344	171	13,969	1,474,120	803,320	6,741,612	12,284
1985										
1st Qtr	16,937,396	15,663,378	5,458,744	157	6,182	1,587,065	668,642	6,664,066	11,891	
10f. Petrochemicals										
1983	10,671,359	10,252,467	2,862,854	2,309,131	622	2,715	3,659,233	170,909	0	43
1st Qtr	2,915,229	2,809,829	681,265	633,604	159	496	1,114,860	33,908	0	12
2nd Qtr	2,453,448	2,353,574	668,978	568,849	151	603	878,077	35,565	0	10
3rd Qtr	2,500,956	2,395,241	763,243	527,906	164	958	764,183	45,538	0	10
4th Qtr	2,801,726	2,693,823	749,368	578,772	148	658	902,113	55,898	0	11
1984	10,759,857	10,355,784	3,034,433	2,389,831	554	2,250	3,287,610	195,084	0	52
1st Qtr	2,973,144	2,861,401	727,849	664,235	155	651	975,865	48,604	0	16
2nd Qtr	2,552,256	2,446,591	730,440	571,325	135	754	803,053	44,199	0	13
3rd Qtr	2,484,769	2,410,914	812,913	521,971	127	457	645,441	58,227	0	10
4th Qtr	2,749,688	2,636,878	763,231	632,300	137	388	863,251	44,054	0	13
1985										
1st Qtr	2,882,478	2,762,720	767,584	728,642	118	383	987,601	40,247	0	9

Table 10 - continued

	Total oil equiv. (kl)	Fuels (kl)	Electricity (1,000 kwh)	Steam (mt)	Gasoline (kl)	Light Oil (kl)	Fuel Oil (kl)	LPG (mt)	Coal (mt)	Propane (1,000 cu m)
10g. Rubber Products										
1983	421,307	511,718	1,372,386	442	563	126	256,992	9,883	0	8,140
1st Qtr	109,581	80,785	314,761	0	108	25	70,647	2,537	0	2,009
2nd Qtr	99,951	285,080	337,420	0	148	37	59,948	2,287	0	2,005
3rd Qtr	100,049	66,835	362,702	442	149	29	57,925	2,304	0	1,985
4th Qtr	111,726	79,018	357,503	0	158	35	68,472	2,755	0	2,141
1984	428,331	297,132	1,434,033	0	685	129	257,769	10,200	0	8,116
1st Qtr	120,508	88,465	350,240	0	167	32	77,142	2715	0	2113
2nd Qtr	101,965	69,362	356,360	0	179	35	59,801	2,475	0	2,072
3rd Qtr	98,234	64,483	368,901	0	171	30	55,841	2,403	0	1,947
4th Qtr	107,624	74,822	358,532	0	168	32	64,985	2,607	0	1,984
1985										
1st Qtr	114,253	82,370	348,478	0	160	33	71,438	2,527	0	1,889
10h. Ceramics, Mineral and Glass Products										
1983	15,482,503	13,704,248	17,650,915	889,485	1,554	28,424	3,007,179	192,953	8,841,061	74,080
1st Qtr	3,851,741	3,406,708	4,298,155	252,677	411	6,956	723,746	51,673	2,130,041	16,177
2nd Qtr	3,766,424	3,330,893	4,005,142	183,705	394	6,816	737,637	47,181	2,114,575	16,991
3rd Qtr	3,839,295	3,411,167	3,923,939	214,477	371	7,164	777,798	45,824	2,194,552	18,749
4th Qtr	4,025,043	3,555,480	5,423,679	238,626	378	7,488	767,998	48,275	2,401,893	22,163
1984	14,493,878	12,694,184	16,864,678	1,014,983	1,362	26,063	2,991,235	209,237	9,234,246	94,106
1st Qtr	3,663,007	3,191,379	4,355,255	274,389	346	6,729	782,611	50,174	2,159,973	21,493
2nd Qtr	3,467,048	3,022,278	4,107,869	228,124	354	6,521	732,295	51,462	2,170,662	22,981
3rd Qtr	3,515,642	3,090,588	3,974,390	244,379	320	6,201	751,764	52,169	2,273,811	22,997
4th Qtr	3,848,181	3,389,939	4,427,164	268,091	342	6,612	724,565	55,432	2,629,800	26,635
1985										
1st Qtr	3,426,340	3,000,650	4,106,859	285,496	311	5,891	738,150	54,728	2,150,223	27,289
10i. Iron and Steel										
1983	45,462,302	40,204,863	53,038,384	3,822,903	6,307	66,621	2,194,392	412,776	25,005,508	98,590
1st Qtr	10,996,218	9,706,519	13,144,789	906,218	1,487	17,822	570,391	111,274	6,010,547	25,315
2nd Qtr	11,152,201	9,831,906	13,307,969	800,322	1,702	17,106	527,998	99,817	6,052,492	20,007
3rd Qtr	11,424,961	10,152,018	12,807,441	905,873	1,586	15,211	535,090	99,128	6,377,992	25,688
4th Qtr	11,888,922	10,514,420	13,778,185	1,210,490	1,532	16,482	560,913	102,557	6,564,477	27,580
1984	50,509,329	46,178,724	56,028,722	3,086,995	6,208	61,699	2,254,793	419,111	35,313,446	124,619
1st Qtr	12,083,344	10,723,888	14,745,412	1,285,683	1,597	16,867	619,319	108,464	6,684,202	28,028
2nd Qtr	12,799,775	12,456,987	13,828,439	574,190	1,630	15,889	557,530	101,554	9,406,381	30,536
3rd Qtr	12,766,537	11,487,347	13,362,853	570,258	1,445	15,458	532,236	100,748	9,611,619	32,311
4th Qtr	12,859,673	11,510,502	14,092,018	656,864	1,536	13,485	545,708	108,345	9,611,244	33,744
1985										
1st Qtr	12,847,505	11,543,614	13,667,257	607,357	1,500	13,433	556,972	108,880	9,595,664	37,034

Table 10 - continued

	Total oil equiv. (kl)	Fuels (kl)	Electricity (1,000 kwh)	Steam (mt)	Gasoline (kl)	Light Oil (kl)	Fuel Oil (kl)	LPG (mt)	Coal (mt)	Propane (1,000 cu m)
10j. Non-Ferrous Metal Ores and Manufactures										
1983	4,375,242	2,880,660	14,609,000	1,054,817	1,074	6,320	1,216,257	184,255	870,492	41,726
1st Qtr	1,113,383	760,031	3,543,701	678,471	263	1,550	342,282	48,636	209,217	9,574
2nd Qtr	1,027,525	652,356	3,630,200	124,201	267	1,554	261,844	44,285	201,124	9,803
3rd Qtr	1,077,577	703,368	3,607,840	116,371	271	1,547	291,102	43,557	228,108	10,882
4th Qtr	1,156,757	764,905	3,827,259	135,774	273	1,669	321,029	47,777	232,043	11,467
1984	4,427,235	2,820,284	15,983,875	635,990	1,159	6,781	1,076,750	192,142	868,317	49,906
1st Qtr	1,155,894	763,064	3,974,317	152,413	295	1,741	320,570	48,905	231,702	12,117
2nd Qtr	1,072,471	661,882	4,020,691	166,651	301	1,656	253,969	46,649	191,521	12,259
3rd Qtr	1,087,063	688,946	3,926,372	146,838	273	1,618	253,160	45,607	234,225	11,847
4th Qtr	1,111,807	706,392	4,062,495	170,088	290	1,766	249,051	50,981	210,869	13,683
1985										
1st Qtr	1,124,699	737,405	3,867,062	179,422	272	1,756	264,899	49,221	243,104	14,446
10k. Machinery										
1983	13,676,921	10,778,350	31,682,053	0	103,466	66,043	1,456,965	347,114	889	377,619
1st Qtr	3,542,895	2,861,352	7,449,429	0	26,108	16,816	523,683	93,638	320	97,213
2nd Qtr	3,211,280	2,506,830	7,699,800	0	26,331	16,501	277,011	84,689	160	88,655
3rd Qtr	3,316,994	2,552,765	8,353,194	0	25,065	15,746	264,099	79,078	154	86,699
4th Qtr	3,605,752	2,857,403	8,179,630	0	25,962	16,980	392,172	89,709	255	105,052
1984	15,249,193	12,102,100	34,398,450	0	106,685	71,101	1,570,753	362,210	1,044	430,882
1st Qtr	3,977,599	3,224,280	8,233,956	0	26,054	17,653	620,409	97,839	230	114,347
2nd Qtr	3,673,631	2,905,169	8,399,466	0	27,158	17,776	310,522	87,816	262	100,863
3rd Qtr	3,705,251	2,883,592	8,980,910	0	25,611	17,472	264,989	80,923	301	97,092
4th Qtr	3,892,712	3,089,059	8,784,118	0	27,862	18,200	374,833	95,632	251	118,580
1985										
1st Qtr	4,095,903	3,298,245	8,718,587	0	27,034	18,003	554,214	101,095	147	124,842

Source: Ministry of International Trade and Industry

Table 11: Japan's Industrial Energy Efficiency

	Industrial Production Index (1980 = 100)	Industrial Energy Consumption Index (millions of kl of oil)	Derived Energy Efficiency Index (1979 = 100)
FY 1979	99.0	231	100
FY 1980	99.1	218	94
FY 1981	99.6	202	87
FY 1982	98.1	186	81
FY 1983	103.9	191	79
FY 1984	112.4	198	76

Source: Ministry of International Trade and Industry

Table 12: Composition of Industrial Energy Consumption Changes in Japan

(in millions of kiloliters of crude oil equivalent)

	Overall Change in Consumption	as a result of:		
		Output Changes	Industrial Structure Changes	Unit of Measure Changes
FY 1980	-10.1	0.2	-7.4	-2.9
FY 1981	-13.8	1.0	-4.8	-10.0
FY 1982	-9.6	-2.8	-2.1	-4.7
FY 1983	5.3	10.4	-1.7	-3.4
FY 1984	7.2	14.9	-4.1	-3.6

Source: Ministry of International Trade and Industry

Table 13: Commercial Energy Generating Projects, FY 1985

Project	Participants
• Methanol gas turbine-related technology	Japan Automotive Research Institute
• High-efficiency production process for high-calorie propane	Saibu Gas Co., Ltd.; Mitsubishi Petrochemical Engineering Co., Ltd.
• High-efficiency combustion, highly dispersed powdered coal-fueled, general purpose boiler	Hitachi, Ltd.
• Methanation, high-temperature, high-pressure, water/steam production system	Kobe Steel, Ltd.
• Substitution of natural gas for petroleum product (LPG) fuels in gas coke ovens	Kansai Coke and Chemicals, Co., Ltd.
• Powdered coal burner using an oxygen pre-heater	Nippon Sanso K.K.
• Heating equipment using liquid fuels derived from biomass	Mitsubishi Heavy Industries, Ltd. Yanmar Deisel Engine Co., Ltd.
• New compound fuels based on various liquified fuels and charcoal products	Shinagawa Fuel Co., Ltd.
• Solar battery-powered, mobile, high-efficiency hydrogen production system	Hokusan Ltd.
• Wave-powered heat recovery system	Taisei Corp.
• High-temperature, separation energy recovery system using heat-proof parts	Fuji Electric Co., Ltd.
• Blast furnace heat utilization system	Nippon Sheet Glass Co., Ltd.
• Efficient heat systems using metallic hydrogen	Matshushita Industrial Electric Co., Ltd.; Sekisui Chemical Co., Ltd.; Chuo Denki Kogyo Co., Ltd.; Nippon Chemical Technology Co., Ltd.
• Energy-efficient, high-density mechanical separation system	Meidensha Electric Mfg., Co., Ltd.
• Hot water and cooling/heating system using compound energy sources	Sanden Corp.
• Household, multi-stage, heat collector and heat management system	Matsushita Jusetsu Kiki K.K.
• High-efficiency methane fermentation system	Research Union for New Manufacturing Technology of Household Chemical Products

Table 14: MITI Citations for Energy Efficient Products, FY 1984

Product	Company
• Diesel total-energy system	Yanmar Diesel Engine Co., Ltd.
• Lightweight, keyless, relief rotary printing press	Tokyo Kikai Seisakusho, Ltd.
• Engine-type concrete breaker	Yamada Heavy Machinery Co., Ltd.
• High-frequency, 4-quadrant chopper control device	Mitsubishi Electric Corp.
• Main marine diesel engine oil cooler using crude oil or waste heat	Matsui Iron Works Co., Ltd.
• Energy-efficient hydraulic system for hydraulic power shovels.	Komatsu, Ltd.
• Coke-burning air/water heater	Yoshimine Boiler Industry Co., Ltd.
• Energy-efficient, self-contained steam generator for steam-powered equipment	Kimura Chemical Plants Co., Ltd.
• Internally installed, blast furnace super-heating gas generator (oxygen reduction cartridge-type)	Chugai Ro Co., Ltd.
• High-efficiency, counter-rotating steam turbine	Mitsubishi Heavy Industries, Ltd.
• High-capacity, high-performance, multistage centrifugal compressor	Hitachi, Ltd.
• Steam temperature estimator/control device for boilers	Hitachi, Ltd.
• Free-floating steam trap	TLV Co., Ltd.
• Water-sprinkling, moisture-checking blast furnace device	Nippon Steel Corp.

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Intervention Drives Dollar Down -- At Least For Now

During the last ten days of September, the value of the yen increased from Y242=$1.00 to Y216, its highest level since early December 1981. This 12 percent appreciation followed the September 22 announcement that the United States, Japan, Britain, West Germany and France would take measures to lower the value of the dollar. The appreciation of the West German mark and British

Japan's Economy Rebounds In Second Quarter

Led by brisk exports and business investment, Japan's economy in the April-June quarter recovered from its January-March pause. Gross national product grew at an inflation-adjusted annual rate of 7.9 percent, compared to just 0.8 percent during the first three months of 1985. The 4.8 percent annual growth rate recorded in the first six months is in line with the government's 4.6 percent growth forecast for FY 1985.

According to the Economic Planning Agency, external demand accounted for 4.3 percentage points of the growth in GNP in the second quarter of the calendar year. The net external sector's large contribution to growth was a result of a nearly 20 percent increase in exports and flat imports. Increased car shipments to the United States, resulting from the higher export limits established in April, and sales of consumer electronic goods to China, particularly color television sets, accounted for much of the increase in exports. Declining imports of oil and other industrial and agricultural inputs helped hold the increase in imports to only 0.4 percent. Expectations of falling prices have led Japan to delay its purchases of oil.

In contrast to external demand, domestic demand in the April-June period was rather sluggish. Personal consumption spending increased only 2.8 percent. The small 1.9 percent increase in employees' compensation led to the disappointing personal consumption figures. Growth in residential construction fell to 2.3 percent after three quarters of strong growth. One bright spot was a 22.9 percent increase in business investment, which was partly a result of the expansion in exports to the United States. For example, the automotive industry is expected to invest about 23 percent more during FY 1985 than during the previous fiscal term. Public sector spending in real terms was lower in the second calendar quarter than in the previous three-month period. Government investment declined for the third consecutive quarter, while current expenditures increased 3.4 percent compared to 4.3 percent in the first quarter of calendar 1985.

It is clear that Japan's economic growth remains dependent on exports. But with exports beginning to slow, an expansion of domestic demand may be necessary to maintain economic growth at an acceptable level. There are several indications, however, that domestic demand is also slowing down. New housing starts in both July and August fell below the 1.2 million-unit annual rate for the first time since September 1984. In addition, household spending in July showed little change, increasing only 0.1 percent in real terms from a year earlier.

The prospects of weak foreign and domestic demand have increased the pressure on the government to adopt a more stimulative fiscal policy. Measures to expand domestic demand are expected to be announced this month. Both the Ministry of International Trade and Industry and the Ministry of Construction have floated proposals to increase social infrastructure investment (see JEI Report No. 33B, August 30, 1985).

Randall S. Jones

Japan's Real Gross National Product at Constant (1975) Prices

(in billions of yen, seasonally adjusted, quarterly totals and rates of growth at annual rates)

	FY 1983	FY 1984	July-September 1984	October-December 1984	January-March 1985	April-May 1985
Gross National Product	Y213,584.3 (3.9%)	Y225,854.1 (5.7%)	Y223,366.6 (2.6%)	Y228,719.4 (9.9%)	Y229,186.6 (0.8%)	Y233,560.6 (7.9%)
Personal Consumption Spending	111,516.1 (3.1%)	114,422.4 (2.6%)	114,054.3 (2.6%)	114,550.5 (1.8%)	115,612.9 (3.8%)	116,401.3 (2.8%)
Private Residential Construction	9,865.8 (-8.7%)	10,061.8 (2.0%)	9,965.3 (5.8%)	10,198.7 (9.7%)	10,313.3 (4.6%)	10,373.0 (2.3%)
Private Fixed Nonresidential Investment	37,230.3 (5.4%)	41,333.5 (11.0%)	40,658.3 (10.2%)	42,311.4 (17.3%)	42,448.3 (1.3%)	44,693.1 (22.9%)
Change in Business Inventories	977.6 (-26.5%)	1,400.5 (43.3%)	1,485.9 (173.7%)	1,297.2 (-72.2%)	1,671.1 (75.4%)	1,443.1 (-66.8%)
Government Current Expenditures	19,872.1 (3.3%)	20,318.2 (2.2%)	20,270.8 (2.4%)	20,321.6 (1.0%)	20,525.8 (4.1%)	20,696.0 (3.4%)
Government Fixed Investment	18,216.7 (-1.4%)	17,999.5 (-1.2%)	18,504.7 (3.0%)	17,935.6 (-12.9%)	17,323.1 (-14.4%)	16,171.8 (-29.4%)
Change in Government Inventories	-238.9 (*)	119.2 (*)	488.0 (*)	-47.5 (*)	13.9 (*)	102.1 (*)
Net External Sector	16,144.6 (28.9%)	20,198.9 (25.1%)	17,939.3 (-37.4%)	22,151.9 (132.5%)	21,278.2 (-16.7%)	23,680.2 (53.4%)
Exports of Goods and Services and Factor Income Received	44,059.6 (9.2%)	51,265.5 (16.4%)	50,166.9 (5.8%)	53,083.2 (25.4%)	52,385.9 (-5.4%)	54,817.8 (19.9%)
Imports of Goods and Services and Factor Income Paid	27,915.0 (0.3%)	31,066.6 (11.3%)	32,227.6 (32.5%)	30,931.3 (-17.1%)	31,107.7 (2.3%)	31,137.6 (0.4%)

*Cannot be calculated or meaningless.

Source: Economic Planning Agency

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REPORT

NO. 40A October 18, 1985

JAPAN'S POLICIES FOR DECLINING INDUSTRIES: TWO CASE STUDIES

Summary

Tokyo's program to facilitate the retrenchment of basic materials industries hobbled by soaring energy prices or rising labor costs has had a mixed track record. As the first part of this report suggested (see JEI Report No. 34A, September 6, 1985), some industries have made the adjustment, at least on paper, while others continue to flounder. At these extremes are petrochemicals and aluminum -- the two most energy-intensive industries in any country. Eliminating excess capacity has given Japan's petrochemical industry an extended lease on existence in its present form, but this lease could soon run out, forcing manufacturers to make painful decisions they have so far avoided. Japanese primary aluminum producers have already reached this critical junction despite deep capacity cuts and other government-supported adjustment measures. Their continued existence now depends on what steps Tokyo is willing to take to maintain some domestic capability to produce this basic material.

Petrochemicals: Living on Borrowed Time

At first glance, the rebound of the petrochemical industry qualifies as the big success story of Tokyo's adjustment policies for declining industries. Three years ago, the 12 producers of ethylene, the basic building block for petrochemical intermediates like polyethylene, polypropylene, polyvinyl chloride, ethylene oxide, styrene and acrylonitrile were on the critical list, casualties of the convergence of several developments. The two oil crises of the 1970s had undercut the international competitive position of Japanese ethylene makers by jacking up the price of naphtha -- their predominant feedstock and fuel -- roughly nine times, while the 1980-82 economic slump had slashed demand for downstream products at home and abroad. Capacity utilization had dropped to unprecedented levels, swelling unit costs already inflated by the steep hike in naphtha prices just as ethylene prices were tumbling. The result, not surprisingly, was a flood of red ink for the dozen ethylene manufacturers. Today, these same companies are running their plants at capacity -- albeit a capacity that is nearly one-third less than three years ago -- and operating in the black or at least close to the break-even point.

This is certainly evidence of an industry on the mend, but can the turnaround be credited to Tokyo's adjustment policies? Only in part, concede ethylene makers and Ministry of International Trade and Industry officials. The reduction of excess ethylene capacity orchestrated by the government was a key factor in the rebound, but ethylene producers also got some much-needed help from market forces: the worldwide economic upturn that started in 1983 boosted demand for ethylene and its derivatives while a drop in naphtha prices enabled manufacturers to control production costs. More importantly, does the turnaround signify that Japan's petrochemical industry is now viable over the medium to long run? No, industry and government representatives reluctantly admit, since only the symptoms of the erosion of international competitiveness -- surplus capacity -- have been treated, not the underlying causes.

The petrochemical industry's structural difficulties are not hard to identify. Topping the list is the high cost of naphtha. The steep run-up in international energy prices during the 1970s has hurt ethylene makers in all traditional producing countries, but stiffer price hikes for naphtha than for natural gas liquids opened up a big cost gap between ethylene manufactured in Japan and in the United States, where an ethane-propane mix is the feedstock for about 70 percent of ethylene output. To make matters worse, Tokyo's attempts to prop up money-losing oil refineries by regulating imports of less-expensive naphtha put Japanese-made ethylene at a further competitive disadvantage.

While the high cost of naphtha is its main handicap, the petrochemical industry has a host of secondary problems. For one, Japanese ethylene plants are generally smaller than crackers in the United States and therefore do not realize the same economies of scale. The largest facility in Japan is rated at 450,000 metric tons -- about one-third smaller than the plant size considered necessary for maximum efficiency. Most plants, including the newest, have a capacity somewhere around 300,000 metric tons, although several ethylene makers had plants in the early 1980s rated below 100,000 metric tons.

Japanese manufacturers are also less specialized than their American counterparts. The 12 producers of ethylene have developed similar lines of petrochemical intermediates and final products that differ little in quality terms. Competition, consequently, is based almost entirely on price. This is a situation tailor-made for price wars during periods of slumping demand and declining capacity utilization. What makes price wars inevitable under these conditions is that there is no dominant company in the Japanese petrochemical industry. The biggest ethylene producer, Mitsubishi Petrochemical Co., Ltd.,

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controls just one-eighth or so of output, while the top four makers, which include Mitsubishi Chemical Industries, Ltd., Nippon Petrochemicals Co., Ltd. and Mitsui Petrochemical Industries, Ltd., handle perhaps two-fifths.

These structural weaknesses were exposed by the 1973 oil crisis, but the industry's relatively fast and smooth recovery in the mid-1970s made it easy for manufacturers to ignore the signs of eroding international competitiveness. The 1979 oil shock was a different story: petrochemical companies could no longer postpone coming to grips with the industry's problems. They tried to at first, launching a price war to win sales in the shrinking market for ethylene and its derivatives. Acknowledging that this strategy did nothing except tighten their cost-price squeeze, ethylene producers decided in the summer of 1980 to restrict production voluntarily. This plan quickly fell apart, the victim of competitive pressures, forcing MITI to enter the picture in August 1981. Its attempts to restore some degree of pricing stability to the market by limiting ethylene output through administrative guidance were no more successful than the makers' own efforts.

Matters came to a head in 1982. Ethylene production fell for the third year in a row, dropping to just three-fourths of its 1979 peak (see Table 1); in the process, the operating rate slid to under 60 percent. The lingering recession in Japan was obviously the main drag on output, but it was not the only source of headaches. In a first for the industry, petrochemical imports matched exports in 1982. Overseas sales, which had absorbed roughly one-fifth of production in the mid-1970s, were cut in half in response to the widening price differential between Japanese and American ethylene derivatives in Southeast Asian markets. And in a double blow, U.S. petrochemical suppliers hiked their already high exports to Japan, capturing a significant share of the market for such commodity intermediates as polyethylene, polyvinyl chloride, ethylene glycol, ethylene dichloride and acrylonitrile.

Facing losses of Y82.2 billion ($373.6 million at Y220=$1.00) in the 1982 accounting period on top of a combined red-ink entry of Y57.7 billion ($262.3 million) in the previous business year, the 12 Japanese ethylene producers stepped up their long-running campaign for unrestricted naphtha imports and changes in the pricing formula for domestic naphtha. Their message to the government was straightforward: with naphtha already representing 70 percent of the cost of making ethylene and the depreciation of the yen in 1982 raising the feedstock's price, relief was urgent.

MITI, while insisting at first that its hands were tied, finally gave some ground. It upped the volume of foreign naphtha allowed into the country, enabling the petrochemical industry to meet 46 percent of its naphtha requirements with imports in 1982, compared to 36 percent the year before and 29 percent in 1980. Starting in April 1982, moreover, domestic naphtha prices were linked with international prices rather than set independently. At the same time, the government lowered the tax on domestic naphtha from 4.7 percent to 3.5 percent and agreed to lift it in April 1983.

Ethylene makers also got some help on the other side of the cost-price equation -- although only after another price war in the late spring and summer of 1982 had sent petrochemical prices plunging again. That October MITI talked the dozen ethylene companies into forming a recession cartel to coordinate cutbacks in production to what was projected to be a profitable level. The cartel, which ran through June 1983, did shore up prices, but sluggish demand and an inventory overhang continued to keep prices below production costs.

Having persuaded producers of ethylene to set up a recession cartel, MITI tackled the tougher job of convincing makers of this product and its major derivatives to take the one step that might help them regain profitability -- reducing excess capacity, which not only represented a huge fixed corporate cost but also caused the industry's self-destructive price wars. The Industrial Structure Council, the ministry's advisory group, had been weighing various capacity-reduction proposals for the industry since April 1981. By December 1982, it had worked out plans for ethylene as well as polyethylene, polyvinyl chloride, styrene, ethylene oxide and acrylonitrile, targeting the amount of capacity that had to be decommissioned for each product after projecting production in FY 1985 and calculating how much capacity would be needed for this output level assuming a cost-effective operating rate of 90 percent. (The ISC also looked at polypropylene and polystyrene capacity, but decided it was more or less appropriate for estimated FY 1985 production.)

These plans were said to have the full backing of the industry, which participated in their formulation. But when MITI officials sat down with company representatives to figure out firm-by-firm capacity-reduction numbers, this support crumbled. Ethylene producers finally fell in line in June 1983, agreeing to lower capacity from 6.4 million metric tons to 4.1 million metric tons by March 1985 -- a 36 percent reduction on paper, but an 11 percent cut in reality since some 1.6 million metric tons of capacity had already been decommissioned. The logjam broken, manufacturers of polyolefins (polyethylene and polypropylene) and polyvinyl chloride endorsed plans the same month to scrap or mothball 22 percent and 24 percent of their respective capacity. They were followed in August by ethylene oxide makers, which accepted a reduction target of 27 percent. Styrene suppliers, however, dragged their heels on capacity cutbacks until the start of this year, when they conceded to eliminate 26 percent of plant and equipment, while acrylonitrile companies refused to sign up for restructuring.

Despite the problems in reaching a consensus on the disposal of surplus petrochemical capacity, this is really the only part of the various industry restructuring programs that has been implemented. Ethylene capacity, for example, was reduced by 32 percent to 4.3 million metric tons, with the cutback split almost evenly between scrapped and idled plant (see Table 1, JEI Report No. 34A, September 6, 1985), but it took a cartel plus restrictions on investment to achieve this long-overdue result. The same prods were also needed to ensure that makers of polyolefins and polyvinyl chloride shed excess capacity.

The four marketing consortiums Japan's 19 polyolefin makers set up in July 1983 to distribute polyethylene and polypropylene exist mainly in name only, eliminating a source of savings initially pegged at Y38 billion ($172.7 million) annually. Likewise, the four joint sales companies formed in April 1982 by the 17 producers of polyvinyl chloride have not realized the economies of scale achievable through consolidated marketing operations. MITI, moreover, has been no more successful in promoting collaborative arrangements in other business areas. In particular, most proposals for joint production of ethylene derivatives or division of production of these commodity intermediates are still on the drawing boards.

The reluctance of petrochemical manufacturers to move beyond capacity reduction and deal with their competitive handicaps comes as no surprise. As industry watchers suspected, companies have found it difficult to put aside rivalries and team up with competitors in production, marketing or other areas. More importantly, changing domestic and international market conditions have lessened the pressure for remedial action. Production of ethylene and most petrochemical intermediates turned up in 1983's second half, spurred mainly by strengthening domestic demand but also by the U.S. rebound, which reduced the incentive for American petrochemical suppliers to ship to Japan's traditional export markets in Southeast Asia. With the recovery at home and abroad extending through 1984, ethylene output climbed to near-record levels and earnings replaced losses in most corporate balance sheets.

Petrochemical makers also got some relief on feedstock costs. Naphtha costs, which had averaged some Y57,000 ($259) per kiloliter in 1982 and Y49,400 ($225) the next year, dropped in 1984 to an average Y45,300 ($206) per kiloliter. Most of this decline represented falling world oil prices, but some of it reflected the elimination of the tax on domestic naphtha in April 1983. In addition, the government again expanded the volume of foreign naphtha allowed into the country, enabling the industry to supply 61 percent of its feedstock requirements with imported naphtha in both 1983 and 1984. Whatever its cause, the drop in naphtha costs saved petrochemical companies roughly Y102.5 billion ($466 million) last year and insured profitable operations in the face of flat product prices.

Restored profitability should not lull Japanese petrochemical manufacturers into believing that their competitive problems are behind them, warn industry analysts and MITI officials alike. For one, feedstock costs continue to be substantially higher in Japan than in the United States despite declining international oil prices and deregulation-triggered rises in U.S. natural gas prices. The strong dollar offsets some of this differential, but American petrochemical producers still have the ability to undercut Japanese makers in their home market and in Southeast Asia. With the next slump in U.S. demand, it is added, Japan's petrochemical industry could receive a painful reminder of its eroded competitiveness.

This reminder could come much sooner from another source -- the three export-geared petrochemical complexes that have gone into operation this year in Saudi Arabia. Using ethane as the feedstock, the three facilities can turn out 1.6 million metric tons of ethylene a year, earmarked mainly for the production of polyethylene and ethylene glycol. Although the Saudi government has said that exports will be spread throughout the world market and not concentrated on any one country, Japan is likely to be the main destination. In fact, one of the complexes, a joint venture between the Saudi Basic Industries Corp. and the Mitsubishi Group, was built with the intention of shipping three-fourths of its output to Japan. Other major Saudi export markets are expected to include the countries of Southeast Asia that have traditionally been customers of Japanese companies -- a potentially double blow for Japan's petrochemical industry.

Japanese petrochemical executives insist that they are no more blind to the new threats to the industry than they are to its old problems. As proof they cite the incipient movement to replace domestic production of commodity intermediates with imports and concentrate on higher value-added final products like engineering plastics. Critics respond that this is just one small part of the answer. The industry's viability over the medium run, it is maintained, hinges on consolidation through mergers. Barring that outcome, the second-best solution is joint operation of the most efficient plants, supported by collaboration in marketing, transportation and other areas. At a minimum, analysts add, petrochemical producers must decommission additional capacity. This move, if quickly implemented, should enable them to weather the next cyclical downturn in demand, but continued operation beyond that time requires more radical action. The choice is up to them.

Aluminum: Searching for a Life-Support System

If the current revival of the petrochemical industry represents the big success story of Tokyo's adjustment policies for declining industries, then the present deathbed condition of the primary aluminum industry is its most glaring failure. A quick reading of the industry's vital signs leaves no doubt about this conclusion. What were six producers of ingot and 14 plants eight years ago are today five companies with seven smelters -- yet none of them has made any money since the 1980 business year. Capacity has shrunk to just two-fifths of its 1973 size, but an operating rate of 40 percent is not uncommon. Perhaps most telling, ingot imports outweigh domestic production five to one.

The story of the compounding problems of the primary aluminum industry reads much like that of any other energy-intensive industry in Japan. Dependent on oil-fired power plants for roughly three-fourths of their huge electricity requirements, Japanese ingot manufacturers were hit far harder by the first surge in international energy prices than their American counterparts, which can tap less-expensive hydroelectric power and electricity generated by coal-burning plants for about the same proportion of their energy needs. On paper, though, the Japanese industry appeared to be coping successfully with the new production economics, staying right around the break-even point through the mid-1970s, thanks to resilient demand for aluminum at home, a sharp run-up in international product prices and improved energy efficiency.

Despite the appearance of adjustment, neither refiners nor MITI bureaucrats were optimistic about the industry's prospects. In a report released at the end of 1977, the Industrial Structure Council predicted that domestic demand would peak that year and that the appreciation of the yen would pull in more foreign-made ingot, already the source of one-third of the total aluminum supply (see Table 2). The advisory group recommended mothballing part of the industry's capacity, subsidizing the interest costs of mothballed assets and introducing a tariff quota system to moderate import competition. This proposal fell short of the industry's demand for either subsidized electricity rates or a public corporation to buy and sell all domestic and foreign ingot and control entries from abroad. Both options were out of the question, MITI told producers, which were finally persuaded in the fall of 1978 to pare capacity from 1.6 million metric tons to 1.1 million metric tons. The ministry's parallel effort to encourage the six primary aluminum makers to tie up in two groups for production and sales went nowhere, however.

Refiners completed the capacity cutback in a matter of months, beating the 1979 oil crisis by half a year. Although the jump in oil prices pushed electricity costs up to 40 percent of production costs by lifting them from Y8.5 per kilowatt-hour to Y16, it again looked at first like the Japanese industry would overcome the new blow to its competitive position. With speculation inflating international spot-market ingot prices in 1979 and the first part of 1980, smelters were able to boost prices to cover their higher costs. Moreover, demand remained firm, allowing producers to maintain full-capacity operation.

The industry's pricing flexibility came to an abrupt end in the spring of 1980 when the speculative bubble burst and the world economy moved into recession. Domestic ingot prices, which had hit Y508,000 ($2,309) per metric ton in April 1980, plunged, dropping to Y460,000 ($2,090) in July and then falling to Y350,000 ($1,591) a year later. Smelters were caught in a classic cost-price squeeze. Already the world's most efficient producers, requiring only 15,000 kilowatt-hours of electricity to manufacture a metric ton of ingot compared with the 17,500 kilowatt-hours needed in the United States and Canada, Japanese refiners had little room to lower costs.

In a one-two punch to the industry, domestic demand for ingot contracted in 1980 and again the following year while Japanese aluminum fabricators -- which, with one exception, are not affiliated with primary producers -- stepped up their ingot purchases from abroad. This switch in sourcing was not surprising. At Y412,100 ($1,873) per metric ton in April 1980, imported ingot prices were well below peak Japanese prices, and they continued to fall in succeeding months, reaching Y333,900 ($1,518) in July 1981, in response not only to the drop in international spot-market prices but also because of the yen's appreciation.

Their losses mounting, smelters reopened the debate with MITI over options. Once more, the two agendas shared few points in common. Corporate executives renewed their campaign for electricity rate subsidies and import curbs, especially on spot-market imports of American ingot, which, they claimed, were the major cause of 1980's import surge. The ministry again vetoed these alternatives as being economically and politically impossible to implement and pressed instead for joint production and marketing. This course of action, however, was just as distasteful to the industry in 1981 as it had been three years before. That left an additional round of plant closings as the only major option open for discussion.

The Industrial Structure Council issued another report on the outlook for the aluminum industry in October 1981, recommending a cutback in capacity from 1.1 million metric tons to 700,000 metric tons by FY 1985. Refiners had no objections to this target, but divvying up the reduction among the six companies proved to be another matter. With help from an unexpected corner -- the smallest producer decided to pull out of the ingot business, MITI finally forged an industry consensus in June 1982. By that time, however, production was running at only half of the capacity level projected for FY 1985.

This was not the only problem with the new restructuring program. There was also the question of how the industry was to finance the estimated Y45 billion ($204.6 million) cost of eliminating 400,000-plus metric tons of capacity when it had already lost Y53.6 billion ($255.9 million) in the 1981 financial year and was on the way to losing another Y97.5 billion ($443.2 million) in the 1982 business period. MITI and the refiners thought they had found the answer in a two-part plan that was a variant of something tried in 1978. Refiners buying ingot under long-term contract or from overseas primary aluminum projects in which they had a stake would be allowed to import duty-free; so would fabricators and trading companies purchasing from these same sources, but they would be billed for the equivalent of two-thirds of the normal 9 percent tariff on ingot, with this money transferred to smelters to finance capacity disposal.

This proposal was shot down by the Finance Ministry as too expensive in terms of lost tariff revenue. U.S. government opposition also killed the plan, which basically would have left the 9 percent tariff only on spot-market purchases. Enacted in its place was a MITI-industry alternative. Under this program, which ran from April 1982 through March 1985, the duty on a preset volume of ingot purchased by refiners from any supply source was fully rebated. Imports eligible for the program were capped at roughly 400,000 metric tons a year -- an amount equal to the capacity targeted for disposal under the industry's 1982 restructuring plan, with this ceiling allocated among smelters in proportion to the volume of plant closed.

Like the capacity-reduction program, the tariff rebate plan, which generated roughly Y10 billion to Y13 billion ($45.5 million to $59.1 million) a year for the primary aluminum industry, was an example of a government initiative that gave refiners a little breathing space but did nothing to change their prognosis. This became clear in 1983. Domestic demand for ingot revived, but with Japanese production costs so far out of line with the competition's, smelters gave up more of their home market to imports, which hit 1.6 million metric tons compared with a domestic output of just 256,000 metric tons. The industry's only gain from the recovery was that stronger world demand lifted international ingot prices, thereby shoring up prices in Japan and narrowing losses in the 1983 accounting year to Y78.6 billion ($357.3 million).

The recovery's benefits for Japanese aluminum producers were not only slight but also short-lived. International prices reached a cyclical peak in the fall of 1983 and then began a long slide lasting through 1984. This put continuing pressure on domestic prices, which once again did not cover variable costs, much less fixed costs, despite some help on the electricity rate front from declining world oil prices.

Given these market conditions, it was no surprise to find aluminum company representatives camped on MITI's doorstep. It was also no surprise that the discussions, now in their third round, had a certain sameness to them -- as did the outcome. Last December the Industrial Structure Council proposed yet another downsizing for the industry, this time from 700,000 metric tons of capacity to 350,000 metric tons by March 1988. Coupled with this proposal was the recommendation that two of the seven smelters still in operation be decommissioned, leaving each company with one facility.

Although primary aluminum makers were drowning in red ink, it took them until March 1985 to reach agreement with MITI on how the ISC plan would be implemented. In one sense, though, the delay paid off since the tariff rebate system, originally scheduled to expire that month, was extended through March 1988. One modification was introduced: instead of receiving a rebate on the full 9 percent ingot duty, refiners now get 8 percent back.

Is there any reason to believe that the latest restructuring plan will be any more successful than its two predecessors in establishing a viable primary aluminum industry in Japan? The answer is clearly no. The most that can be expected from a program designed mainly to deal with the symptoms rather than the causes of lost Japanese international competitiveness is an industry shrunken down to the country's two most efficient plants. One is a 64,000 metric ton smelter operated by Nippon Light Metal Co., Ltd., the number-one refiner in terms of sales and the only integrated Japanese aluminum maker; this facility has its own hydroelectric plant. The other is Mitsui Aluminum Co., Ltd.'s 144,000 metric ton smelter, which uses powdered coal for electricity generation.

This outcome would meet Tokyo's goal of preserving some domestic primary aluminum production capability for economic security reasons. Direct government subsidies might still be required to maintain this base, however. They certainly would be necessary if the government wanted to retain more than the 200,000-plus metric tons of capacity available at the Nippon Light Metal and Mitsui Aluminum smelters.

For further information, contact Susan MacKnight.

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The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

Table 1: Japan's Apparent Supply of Selected Petrochemicals, 1973-84

(in metric tons)

1a: Ethylene

Year	Production	Exports	Imports	Ratio of Imports to Supply	Ratio of Imports to Production
1973	n.a.	0	0	0.0	0.0
1974	4,175,810	0	0	0.0	0.0
1975	3,399,099	0	0	0.0	0.0
1976	3,802,919	13	0	0.0	0.0
1977	3,978,605	7	0	0.0	0.0
1978	4,387,409	19	---	0.0	0.0
1979	4,783,726	440	2,402	0.1	0.1
1980	4,175,263	13,169	5,399	0.1	0.1
1981	3,654,600	16,147	0	0.0	0.0
1982	3,589,700	15,591	0	0.0	0.0
1983	3,687,700	9,005	0	0.0	0.0
1984	4,385,700	3,207	22,781	0.5	0.5

1b: Ethylene Oxide*

Year	Production	Exports	Imports	Ratio of Imports to Supply	Ratio of Imports to Production
1973	402,553	n.a.	---	---	---
1974	414,653	n.a.	0	0.0	0.0
1975	509,117	n.a.	---	---	---
1976	546,751	135	---	---	---
1977	537,586	200	0	0.0	0.0
1978	630,616	245	2	---	---
1979	593,104	217	0	0.0	0.0
1980	528,621	145	---	---	---
1981	477,762	74	---	---	---
1982	471,151	17	---	---	---
1983	467,927	7	1	---	---
1984	532,795	10	3	---	---

*Ethylene oxide is a gas and therefore not generally traded.

1c: Ethylene Glycol*

Year	Production	Exports	Imports			Ratio of Imports to Supply	Ratio of Imports to Production
			Total	United States	Canada		
1973	377,613	n.a.	20,621	11,422	0	5.2	5.5
1974	403,203	n.a.	55,602	18,828	34	12.1	13.8
1975	534,278	n.a.	28	2	0	---	---
1976	549,282	157,335	2,614	1	0	0.7	0.5
1977	522,894	201,702	7,149	5,150	0	2.2	1.4
1978	630,197	224,327	23,906	16,853	0	5.6	3.8
1979	571,554	147,436	57,019	37,805	0	11.9	10.0
1980	492,202	77,285	80,866	47,292	2,302	16.3	16.4
1981	410,641	50,004	99,883	20,607	59,345	21.7	24.3
1982	384,921	11,580	154,672	88,520	47,742	29.3	40.2
1983	357,471	21,779	158,691	93,985	31,815	32.1	44.4
1984	428,804	39,416	186,484	105,532	57,452	32.4	43.5

*While not covered by the 1983 industrial adjustment law, ethylene glycol is included here because its production is the main use of ethylene oxide.

1d: Ethylene Dichloride*

			Imports				Ratio of Imports to Supply	Ratio of Imports to Production
Year	Production	Exports	Total	United States	Canada	Brazil		
1973	2,180,994	n.a.	80,994	59,738	0	0	3.6	3.7
1974	2,196,607	n.a.	134,335	118,550	0	0	5.8	6.1
1975	1,771,315	n.a.	2,215	2,215	0	0	0.1	0.1
1976	1,653,056	n.a.	89,098	87,109	0	0	5.1	5.4
1977	1,723,105	n.a.	51,513	51,513	0	0	2.9	3.0
1978	1,836,690	n.a.	193,329	180,662	0	0	9.5	10.5
1979	2,110,487	n.a.	387,450	352,626	5,975	0	15.5	18.4
1980	2,060,326	n.a.	201,767	92,495	109,270	0	8.9	9.8
1981	1,650,281	n.a.	179,098	94,240	83,803	1,055	9.8	10.9
1982	1,547,585	n.a.	359,508	191,562	112,207	33,900	18.9	23.2
1983	1,735,800	n.a.	457,065	278,752	61,927	63,021	20.8	26.3
1984	1,939,234	n.a.	486,021	225,805	94,121	97,231	20.0	25.1

*Although ethylene dichloride is not covered by the 1983 industrial adjustment law, it is listed here because it is used to make vinyl chloride monomer, which in turn is used to make polyvinyl chloride, a designated product.

1e: Polyvinyl Chloride

			Imports		Ratio of Imports to Supply	Ratio of Imports to Production
Year	Production	Exports	Total	United States		
1973	1,318,294	150,580	55,955	4,736	4.6	4.2
1974	1,466,889	185,458	43,009	8,106	3.2	2.9
1975	1,125,401	169,509	3,897	1,214	0.4	0.3
1976	1,043,963	159,941	14,839	993	1.7	1.4
1977	1,030,751	127,839	11,604	381	1.3	1.1
1978	1,204,274	80,913	33,156	695	2.9	2.8
1979	1,592,129	122,004	17,846	1,620	1.2	1.1
1980	1,429,298	98,972	35,998	8,008	2.6	2.5
1981	1,129,491	58,783	77,481	23,321	6.7	6.9
1982	1,218,067	59,552	117,831	43,147	9.2	9.7
1983	1,420,396	84,440	72,569	8,732	5.2	5.1
1984	1,503,882	80,201	77,510	840	5.2	5.2

1f: Styrene Monomer

			Imports		Ratio of Imports to Supply	Ratio of Imports to Production
Year	Production	Exports	Total	United States		
1973	935,474	42,987	11,894	11,894	1.3	1.3
1974	1,034,307	97,867	22,085	21,544	2.3	2.1
1975	876,748	72,583	---	---	---	---
1976	1,088,685	58,055	13,003	2,050	1.2	1.2
1977	1,021,720	39,784	13,270	1,557	1.3	1.3
1978	1,122,398	40,583	28,756	19,836	2.6	2.6
1979	1,238,284	16,309	63,778	41,819	5.0	5.2
1980	1,114,246	2,590	109,482	81,178	9.0	9.8
1981	1,095,147	5,915	166,793	141,128	13.3	15.2
1982	1,085,511	20,358	76,694	50,386	6.7	7.1
1983	1,167,198	2,024	118,725	71,340	9.2	10.2
1984	1,423,312	5,148	132,185	76,966	8.5	9.3

1g: Polyethylene

Year	Production	Exports	Imports		Ratio of Imports to Supply	Ratio of Imports to Production
			Total	United States		
1973	1,671,695	399,721	4,760	3,337	0.4	0.3
1974	1,897,047	363,655	18,771	10,568	1.2	1.0
1975	1,294,529	413,365	251	203	---	---
1976	1,392,461	355,130	1,188	937	0.1	0.1
1977	1,466,724	437,407	999	543	0.1	0.1
1978	1,766,572	423,474	7,722	1,192	0.6	0.4
1979	2,165,308	304,449	8,831	3,980	0.5	0.4
1980	1,860,198	274,532	14,884	3,441	0.9	0.8
1981	1,670,675	281,392	49,045	9,335	3.4	2.9
1982	1,774,101	273,185	67,654	16,302	4.3	3.8
1983	1,773,050	249,304	39,275	9,619	2.5	2.2
1984	2,251,072	297,292	28,446	3,826	1.4	1.3

1h: Polypropylene

Year	Production	Exports	Imports		Ratio of Imports to Supply	Ratio of Imports to Production
			Total	United States		
1973	693,318	140,901	6,790	6,405	1.2	1.0
1974	791,685	99,569	10,172	7,499	1.4	1.3
1975	594,482	154,348	96	80	---	---
1976	668,970	115,586	132	131	---	---
1977	607,830	141,531	405	41	0.1	0.1
1978	744,662	160,762	473	182	0.1	0.1
1979	1,022,717	98,313	9,277	4,263	1.0	0.9
1980	927,170	66,762	15,735	4,483	1.8	1.7
1981	958,634	117,032	15,971	1,462	1.9	1.7
1982	940,851	116,212	7,497	1,376	0.9	0.8
1983	1,062,071	100,644	7,841	1,398	0.8	0.7
1984	1,271,453	97,947	4,526	139	0.4	0.4

Source: Ministry of International Trade and Industry, *Industrial Statistics Monthly*, and Japan Tariff Association, *Japan Exports and Imports: Commodity by Country*

Table 2: Japan's Apparent Supply of Primary Aluminum Ingot, 1973-84

(in metric tons)

Year	Production	Exports	Imports					Ratio of Imports to Supply	Ratio of Imports to Production
			Total	United States	Canada	Australia	New Zealand		
1973	1,096,765	2,875	475,654	41,133	79,576	37,752	76,801	30.3	43.4
1974	1,118,374	34,860	478,904	65,398	73,917	31,162	82,105	30.7	42.8
1975	1,013,259	83,506	378,333	30,246	48,330	66,548	82,661	28.9	37.3
1976	919,425	69,706	430,125	34,228	12,963	44,319	105,156	33.6	46.8
1977	1,188,197	99,649	533,807	11,478	67,386	61,371	110,284	32.9	44.9
1978	1,057,710	54,594	740,204	39,443	124,997	59,125	121,551	42.5	70.0
1979	1,010,409	7,946	748,438	109,270	108,811	37,425	110,132	42.7	74.1
1980	1,091,477	7,644	910,085	308,712	123,589	26,368	93,079	45.6	83.4
1981	770,602	12,160	1,129,322	266,325	116,152	69,580	108,574	59.8	146.6
1982	350,706	6,681	1,446,566	306,456	193,110	111,661	122,833	80.8	412.5
1983	255,900	1,679	1,603,732	259,466	141,621	114,735	175,954	86.3	626.7
1984	286,728	2,283	1,347,817	177,683	111,405	236,530	154,246	82.6	470.1

Source: Ministry of International Trade and Industry, *Industrial Statistics Monthly*, and Japan Tariff Association, *Japan Exports and Imports: Commodity by Country*

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JAPAN-KOREA ECONOMIC RELATIONS

Summary

Lingering animosity from the colonial period has made postwar relations between Japan and the Republic of Korea complex and unstable. On the twentieth anniversary of the normalization of diplomatic relations between Japan and Korea, however, the two countries are moving in the direction of closer economic and political ties. The two are major trading partners and Japan is the largest foreign investor in Korea. Tokyo's exports to Korea consist largely of capital goods, its imports of consumer goods. Korea's rapid economic development has led many to label it a second Japan, and it increasingly finds itself involved in the trade conflict between its two major trading partners.

Introduction

Rapid economic growth during the past two decades has made the Republic of Korea, Japan's nearest neighbor, a significant economic force. With an average annual real growth rate of 8.7 percent since 1962, per-capita income has increased from $87 to more than $2,000. Exports of $26.3 billion last year made Korea the fourteenth-largest exporter in the world.

Extensive economic ties have developed between Japan and Korea, which ranked as each other's second-largest export market after the United States in 1984. Korea accounted for 4.2 percent of total Japanese exports, while Japan's share of Korean exports was 15.7 percent. Japan's direct investment in Korea since 1962 exceeds $1 billion and accounts for nearly one-half of total foreign investment in that country.

On the twentieth anniversary of the normalization of diplomatic relations between Japan and Korea, the relationship between the two countries appears relatively good. In January 1983, Yasuhiro Nakasone made Korea the site of his first overseas trip as prime minister. Korean President Chun Doo Hwan made a state visit to Tokyo the next year, becoming the first Korean head of state to visit Japan. Despite the efforts of political leaders, the historic animosity persists. In a poll that asked which country was friendliest to Japan, South Korea was chosen by only 0.6 percent, compared to 20 percent for China and 3 percent for the Soviet Union. This perception is reciprocated by the South Koreans, who rank the Japanese next to the North Koreans in their own opinion polls.

Historical Overview

When annexed by Japan in 1905, Korea was a backward, feudal economy that had been isolated throughout much of its history. The lack of transportation and communication systems, the absence of a coherent monetary system and government restrictions had retarded the development of a market economy. The colonial government established an ambitious program to develop the peninsula for Japan's benefit. Its status as a food importer led Japan to concentrate on the development of Korean agriculture. The transfer of Japanese agricultural technology to Korea greatly increased production and resulted in large food exports to Japan. The development of agriculture in Korea as well as in Taiwan enabled the Japanese Empire to achieve self-sufficiency in food in the 1930s.

Although the colonial government did not actively promote industrial development until 1930, the establishment of banks and social infrastructure encouraged industrialization. In the 1930s, the policy of promoting self-sufficiency in the Japanese Empire prompted zaibatsu (large conglomerates) to invest in Korea. Japanese capital established large chemical and machinery plants, especially in northern Korea, where there were abundant mineral and energy supplies. Heavy industry accounted for about one-fourth of Korea's exports to Japan by 1935.

From 1912 to 1938, the Korean economy matched the Japanese growth rate of 3.4 percent. Although colonial rule was intended to benefit Japan, the policies pursued encouraged Korea's development. Per-capita consumption is estimated to have increased at an annual average rate of 2 percent, despite a rapid rise in the population. There was also considerable structural change, as the manufacturing sector's share of commodity output increased from one-fourth in 1916 to one-half by 1936.

The transformation of Korea compares favorably in many respects with European colonialism in Africa and elsewhere in Europe. Despite economic development, the repressive nature of the colonial government was a bitter experience for Korea. The lingering animosity has made postwar relations between the countries complex and highly unstable.

With the liberation and division of Korea at the end of World War II, Syngman Rhee became the president of South Korea. The strongly anti-Japanese Rhee resisted American pressure to restore bilateral ties. Negotiations

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between the two countries, which began in 1951, made little progress until the military coup in 1961 that brought Park Chung Hee to power. The priorities of the new government, namely rapid economic growth, finally led to an agreement. Korea's military regime considered economic ties with Japan to be essential to secure new capital for the expansion of the economy. The treaty to normalize relations, concluded in 1965, recognized the Republic of Korea as the only legitimate government in Korea and committed Japan to pay Korea $300 million in compensation and provide another $500 million in loans and credits.

Prime Minister Eisaku Sato's belief that South Korea's security was essential to the security of Japan encouraged the development of working relations between the two countries. The Sato government restricted Japanese ties with North Korea and provided more aid to Seoul than promised in the 1965 treaty. Between 1965 and 1972, Japan supplied Korea with $970 million in grants, credits, and government and commercial loans -- altogether about one-fifth of Korea's total foreign capital requirements during that nation's second five-year economic development plan (1967-71). Moreover, trade increased rapidly, with Japan's exports to Korea rising from $180 million in 1965 to $980 million in 1972 (see Table 1).

Table 1: Japan's Trade with the Republic of Korea, 1965-84

(in millions of dollars)

Year	Exports (f.o.b.)	Imports (c.i.f.)	Trade Balance	Korea's Overall Trade Balance
1965	$ 180	$ 41	$ 139	$ -241
1966	335	72	263	-430
1967	407	92	315	-574
1968	603	102	501	-836
1969	767	134	633	-992
1970	818	229	589	-922
1971	856	274	581	-1,044
1972	980	426	554	-574
1973	1,789	1,207	582	-566
1974	2,656	1,568	1,088	-1,938
1975	2,248	1,308	940	-1,671
1976	2,824	1,917	908	-590
1977	4,080	2,114	1,966	-477
1978	6,003	2,591	3,412	-1,780
1979	6,247	3,359	2,887	-4,395
1980	5,368	2,996	2,372	-4,384
1981	5,658	3,389	2,269	-3,628
1982	4,881	3,254	1,627	-2,594
1983	6,004	3,365	2,639	-1,763
1984	7,227	4,213	3,014	-1,036

Sources: Japan Tariff Association, The Summary Report: Trade of Japan; International Monetary Fund, International Financial Statistics.

With the resignation of Mr. Sato in 1972 and the establishment of diplomatic ties between Japan and the People's Republic of China, Tokyo became less willing to be identified exclusively with South Korea. The abduction of Kim Dae Jung, a leading opposition politician, in Tokyo in 1973 and the assassination of President Park's wife by a Korean resident of Japan also strained relations. Moreover, the policies of Prime Minister Takeo Miki's government reflected a desire to maintain stability on the Korean peninsula while expanding contacts with North Korea.

Japan's opposition parties, particularly the Japan Socialist Party, have opposed closer ties with South Korea, and favored an upgrading of relations with North Korea, with whom Japan does not have diplomatic relations. They object to the military nature of the Seoul government and fear a military alliance linking Japan, South Korea and the United States. Economic links to North Korea, however, have been limited because of Pyongyang's failure to pay back Japanese loans it received in the 1970s. Last year, Japan's two-way trade with North Korea was only 3.5 percent of its trade with South Korea.

Although Korea was graduated from Japan's aid program, Seoul requested a $6 billion aid package in 1981, stressing that it considered such assistance to be a trade-off for Korean security efforts. Tokyo rejected both the amount and the reasoning behind the request. In January 1983, however, the two countries agreed to a seven-year $4 billion aid program. In August 1985, the two countries initialed an accord on science and technology intended to promote transfers of Japanese technology to Korea through the government and other public institutions.

Korea's Economy in 1985

Following the 1980 recession, when real gross national product fell 5 percent and inflation reached 35 percent, Korea's economy grew rapidly, fueled by a doubling in exports to the United States between 1980 and 1984. Real GNP growth from 1982 through 1984 averaged 7.5 percent despite austere monetary and fiscal policies that cut inflation to an annual 2 percent rate. Money supply growth was reduced from 27 percent in 1982 to less than 10 percent in 1984. Public-sector deficits have been reduced by higher indirect taxes, the imposition of a 5 percent tariff on imported oil, and cuts in government spending. Moreover, extensive structural reform in the 25 state-owned corporations has increased efficiency and cut costs.

But the nation is now facing its worst business slump since 1980. During the first half of this year, exports, the basis of much of Korea's economic success, failed to increase above 1984 levels. Economic growth in the April-June 1985 period slowed for the fifth consecutive quarter, increasing only 2.7 percent above the same period in 1984 (see Table 2). The economy must grow at about 6 percent annually just to employ Korea's rapidly increasing labor force. Failure to achieve this level has serious implications for the country's political stability.

For the first half of 1985, real GNP growth was 3.2 percent, less than one-third of the 10.5 percent expansion in the same period a year earlier. Mining and manufacturing output in the second quarter was only 3.1 percent greater than in the April-June 1984 period, reflecting slowing economic

Table 2: Key Economic Indicators of the Republic of Korea

2a: Real Growth Rates

(in percent)

	1983	1984	January-March 1984	April-June 1984	January-March 1985	April-June 1985
GNP	9.5%	7.5%	12.7%	8.8%	3.9%	2.7%
Agricultural Production	6.3	0.3	14.3	-6.5	2.2	0.9
Mining and Manufacturing	10.8	14.3	17.7	15.8	5.2	3.1
Consumption	6.3	5.3	7.4	4.8	5.2	3.1
Investment	16.6	5.6	14.1	9.2	2.6	1.2
Exports	11.6	7.9	17.1	10.3	-0.3	1.6
Imports	9.1	7.6	8.5	9.5	0.6	0.2

2b: Balance of Payments

(in millions of dollars)

	1983	1984	January-March 1984	April-June 1984	January-March 1985	April-June 1985
Current Account Balance	$-1,606.0	$-1,371.3	$-680.0	$-492.0	$-579.3	$-411.7
Trade Balance	-1,763.5	-1,035.9	-643.0	-397.0	-509.6	-41.4
Exports	23,203.9	26,334.6	5,861.0	6,602.0	5,794.6	6,658.4
Imports	24,967.4	27,370.5	6,504.0	6,999.0	6,304.2	6,699.8
Invisible Trade Balance	-434.6	-876.3	-152.0	-234.0	-197.3	-495.7
Net Transfers	592.1	540.9	115.0	139.0	127.6	125.4
Long-Term Capital	1,270.4	2,000.0	580.1	-31.5	275.1	-54.1
Basic Balance	-335.6	628.7	-99.9	-523.5	-304.2	-465.8
Foreign Exchange Holdings (end of period)	6,909.7	7,649.6	6,309.2	6,721.8	6,735.9	6,631.8

Sources: Korea, Economic Planning Board, Economic Bulletin and Monthly Statistics of Korea; International Monetary Fund, International Financial Statisitics.

activity in the United States, which accounted for 36 percent of Korea's exports in 1984. The government's goal for inflated-adjusted growth has been revised downward from 7.5 percent to 5 to 6 percent.

Korea's current account deficit during the first six months of this year was $911 million, exceeding the target of $700 million for the entire year. The decline in the construction industry's overseas earnings, which were off by roughly two-fifths, is a major cause of the current account deficit. Income from such projects, many of which are located in the Middle East, has been falling along with the price of oil since 1983.

The 1985 trade deficit through June of $551 million was actually less than in the same period in 1984, thanks to a larger decline in imports than in exports. The 3.7 percent drop in imports was led by a 16.6 percent fall in purchases of capital goods. Korea's exports have suffered from a high degree of concentration both in product and market. Exports to its major market, the United States, fell 4.1 percent during the first six months of 1985. Shipbuilding, textiles and shoes, which account for nearly one-half of exports, fell 12 percent. One bright spot has been a surge in car exports, which during the first half of 1985 jumped 175 percent. But cars still only account for 2.5 percent of Korea's total exports.

Seoul continued its import liberalization plan in 1984 despite new restrictions on its exports of steel, textiles and color television sets. Last year, 351 items were removed from the import-ban list. Just this past week, moreover, Seoul agreed to set a timetable for lifting import controls on an additional 603 products over the next three years.

Korea's foreign borrowing abroad to finance the current account deficit and to service its debt is expected to reach $6.8 billion in 1985. Although its foreign debt of $45.3 billion is the fourth-largest in the world, Korea's success in international trade has enabled it to avoid the financial troubles that beset some Latin American countries. Its debt-to-exports ratio is only the 16th largest, and the ratio of short-term debt to total debt has fallen. Still, the large debt has led Korea to delay some major projects. At the same time, though, it has encouraged Seoul to gradually ease restrictions on foreign investment since 1980 in order to rely less on borrowing from abroad. Last week, the Ministry of Finance opened an additional 102 business areas to foreign investors and simplified procedures for getting foreign investments approved. This step should accelerate foreign investment, which, at $93 million during the first four months of 1985, is already running 53 percent above the same period in 1984.

Korea's leading indicators give no indication of an upturn in the next few months from the first half's sluggish pace, leading the government to take measures to stimulate domestic demand. Concern over the size of the foreign debt, though, limits efforts to increase domestic demand, since such policies increase imports and worsen the current account deficit, forcing more foreign borrowing. While servicing its debt presents no serious problems at present, reducing the growth of its external debt is a top priority for Seoul. Moreover, the climate for international borrowing is generally less favorable.

The decline in Korea's trade is not unique -- other Asian countries, such as Hong Kong, Taiwan and Singapore, are experiencing a disappointing export year. But the decline is worrisome in light of the fact that it is occurring before the U.S. trade deficit has begun to shrink, as it must sooner or later, and before the passage of new protectionist measures threatened in the United States. Korea's Economic Planning Board estimates that if the textile bill becomes law, its exports would fall $500 million and growth would contract 0.5 percentage points, rendering 30,000 workers unemployed.

Policies taken by Seoul to stimulate the economy include allowing its currency to depreciate from won 830=$1.00 in January 1985 to won 900. Monetary targets have been increased and a supplementary budget of $289 million has been announced, 80 percent of which will be spent on infrastructure projects. Government expenditures are scheduled to rise by 10.2 percent in the next fiscal year. Moreover, limits on bank lending to the country's 30 largest companies have been loosened and steps to improve conditions for exporters, such as cheaper export finance, have been taken.

Korea's economic prospects, of course, depend on a continued stable political climate. No Republic of Korea head of state has ever left office voluntarily. President Chun has promised to step down in 1988. A second element of risk is the large role of the conglomerates. Korea's big firms tend to rush together into the same new area, aided by cheap loans from the government that deprive the rest of the economy of capital. For example, four major corporations -- Samsung, Goldstar, Hyundai and Daewoo -- have recently entered the slumping semiconductor business. The risk is that the conglomerates will choose to enter the wrong sectors.

Japan-Korea Trade

Trade between Japan and Korea has sometimes been summarized by saying that Japan exports capital goods, such as machinery, to Korea, while importing consumer nondurables like clothing and footwear. Table 3 divides trade into 24 product groups. As expected, Korea, the less advanced of the two, has a trade surplus in both primary products and light industrial products. Textiles and apparel are its major exports to Japan, accounting for about 23 percent of the total. Despite increasing competition from other Asian countries, Korea remains the largest exporter of yarn, fabric and made-up goods to Japan, accounting for about one-fourth of Japan's textile imports. Footwear and apparel, which are also labor-intensive, are other important export products.

The 73 percent share of heavy industrial products in two-way Japan-Korea trade reflects the comparative advantages of the two countries. Lacking natural resources, primary products constitute only a small share of the total. The proportion of light industrial products traded has fallen from 30 percent in 1976 to less than 19 percent in 1984. Competition from less developed countries has made it more difficult to survive in those markets, leading the two countries to focus on heavy industry.

Japan has a large bilateral surplus in heavy industrial products, which account for almost 90 percent of its exports to Korea. Electric and nonelectric machinery is Japan's major export to Korea, with a 40 percent-plus share of all deliveries. Steel exports are important to both countries, although Japan has a large surplus in that category. Other important items are Korean exports of petroleum products and Japanese exports of precision equipment

Table 3: Japan-Korea Trade by Commodity, 1984

(in millions of dollars)

Product Group	Japan's Exports to Korea	Japan's Imports from Korea	Balance	Percent of Two-Way Trade	Intra-Industry Trade Index*
Primary Products	$59.5	$866.2	$-806.7	8.3%	0.87**
Agricultural Products	18.3	819.6	-801.3	7.5	-0.96
Mineral Products	41.3	46.7	-5.4	0.8	-0.06
Light Industrial Products	695.8	1,386.4	-690.6	18.6	0.44**
Textiles	395.8	706.4	-310.6	9.8	-0.28
Apparel	1.0	251.9	-250.9	2.3	-0.99
Leather Products	159.3	67.3	92.0	2.0	0.41
Footwear	2.1	151.8	-149.7	1.4	-0.97
Food Products	16.1	75.6	-59.5	0.8	-0.65
Wood Products	14.3	25.6	-11.3	0.4	-0.28
Printing	20.0	3.1	16.9	0.2	0.73
Tobacco Products	0.2	4.7	-4.4	---	-0.90
Beverages	0.1	2.4	-2.3	---	-0.91
Miscellaneous Manufacturing	86.9	97.7	-10.8	1.7	-0.06
Heavy Industrial Products	6,335.1	1,866.2	4,469.0	73.2	0.67**
Electric Machinery	1,331.1	341.4	989.6	14.9	0.59
Nonelectric Machinery	1,596.4	45.8	1,550.6	14.7	0.94
Steel	1,033.3	468.5	564.8	13.4	0.38
Chemical Products	806.5	111.1	695.4	8.2	0.76
Petroleum Products	81.4	581.1	-499.7	5.9	-0.75
Precision Instruments	513.8	126.7	387.1	5.7	0.60
Rubber Products	338.4	57.1	281.3	3.5	0.71
Nonmetallic Mineral Products	180.3	84.1	96.2	2.4	0.36
Transportation Equipment	223.2	3.7	219.5	2.0	0.97
Nonferrous Metals	129.5	37.7	91.8	1.5	0.55
Metal Products	50.3	4.7	45.6	0.5	0.83
Pulp and Paper	51.2	4.3	46.9	0.5	0.84
Subtotal	7,090.5	4,118.8	2,971.7	100.0	0.64**
Re-exports	136.4	94.0	42.4		
Total	7,226.8	4,212.7	3,014.1		

*This index is calculated using the following formula:

$$\frac{\text{Exports to Korea} - \text{Imports from Korea}}{\text{Exports to Korea} + \text{Imports from Korea}}$$

If all trade in a product group consists of Japanese exports, the index is 1. Conversely, it is -1 if Korea specializes completely in that group. The closer the index is to 0, the more even the pattern of industrial specialization.

**Weighted average (absolute value).

Source: Japan Tariff Association, Japan Exports and Imports: Country by Commodity.

(although this product group includes video cassette recorders, tape recorders, tape decks and turntables).

Despite Japan's continued bilateral surplus in heavy industrial products, Korea's success in exporting those products is notable. In 1976, for example, Japan imported only $89 million worth of petroleum products from Korea, compared to $581 million last year. Similarly, steel imports rose from $32 million in 1976 to $469 million last year, while purchases of chemical products went from $36 million to $111 million.

The intra-industry trade index in Table 3 indicates a clear-cut pattern of specialization. The overall weighted average of 0.64 means that exports from one country are about five times as great as its imports of items in that category, on average. Rather than a pattern of mutual interdependence between industries in the two countries, there is a vertical relationship, with Japan specializing in heavy industrial goods, particularly capital goods, while Korea specializes in consumer goods.

Excluding the two minor categories of mineral products and wood products, the index shows a relatively even pattern of specialization for only two industries, textiles and miscellaneous manufactures. A closer examination reveals that the pattern of specialization persists within the textile industry. Korean exports of silk, cotton, and knitted and crocheted goods greatly exceed its imports of those items. Japan dominates trade in textile products requiring more capital and large-scale production systems, such as synthetic fibers and metallic textiles.

Japan's trade with countries less developed than Korea shows a pattern that is even more specialized. For example, in Japan's 1978 trade with the six members of the Association of Southeast Asian Nations, it was nearly a 100 percent net exporter or importer in more than half of all trade categories. Japan's trade with the United States shows a less specialized pattern with more intra-industry trade. As the Korean economy develops and as it lowers barriers to imports of consumer goods, the pattern of importing heavy industrial products from Japan while exporting light industrial goods is likely to become more balanced.

Japan's Direct Investment in Korea

Japan is the leading foreign investor in Korea (see Table 4), attracted both by the dynamism of the economy and the availability of inexpensive labor. The steady rise in foreign investment in Korea reflects the liberalization of government regulations beginning in 1980. Major U.S. corporations, including Ford Motor Co., General Motors Corp., General Electric Co. and Texas Instruments Inc., have recently formed joint ventures with Korean conglomerates, and the prospect of foreign competition has encouraged Japanese investment in Korea.

Despite the geographical proximity of the two countries and the volume of trade between them, the level of Japanese investment in Korea is actually quite small compared to its investment in other countries. Of Japan's direct investment in Asia, which accounted for about one-fourth of its worldwide total in the last five fiscal years, Korea ranked fourth behind Indonesia, Hong Kong and Singapore, with only an 8.6 percent share. Despite recent liberalizations, this low level of investment reflects Korean laws that have limited investment from abroad to prevent foreigners from gaining too much control of the economy. In addition, the vibrancy of the economy, which makes Korea an attractive investment site, also make firms hesitant to provide their technology to an able competitor. The so-called "boomerang effect" is illustrated by the increasing Korean share of world steel trade using technology acquired from Japan.

Table 4: Foreign Investment in Korea by Country, 1962-84

(in millions of dollars)

Country	1962-81	1982	1983	1984	Total	Share
Japan	$633.3	$42.6	$167.5	$163.8	$1,007.2	47.4%
United States	310.3	107.6	53.4	191.0	662.3	31.2
Europe	177.9	9.8	23.4	49.8	260.9	12.3
Others	127.1	27.8	23.5	14.4	192.8	9.1
Total	1,248.6	187.8	267.8	419.0	2,123.2	100.0

Source: Korea, Ministry of Finance

Is Korea a Second Japan?

Korea's economic success and competitive exports have led some observers to label it a second Japan. Korean leaders, fearful of being caught in the crossfire of U.S.-Japan trade frictions, generally reject such comparisons. Of course, there are many similarities between the development paths of the two countries. Korea, like Japan, progressed from exports of textiles to more advanced products like cars and steel. Korean firms have emerged as major competitors of Japan in several areas, such as autos, where a Korean-made car is now the leading import in Canada. Both countries have few raw materials and must depend on imports. In 1984, imports of food, fuel and other industrial raw materials were equivalent to 15.9 percent of GNP in Korea and 7.8 percent in Japan.

But a major difference between the two countries is that manufactured imports are much more important in Korea than in Japan. Except for its dependence on imported raw materials, Japan's industrial sector is able to satisfy almost all domestic demand for manufactured goods. Imports of manufactured goods are equivalent to only 2 to 3 percent of GNP. The self-sufficiency of Japan's industrial sector is a consequence of its being the first country to develop in an underdeveloped region located far from other industrialized countries, as well as its protectionist policies in the 1950s and 1960s.

Korea, in contrast, is dependent on manufactured imports, which amounted to about 22 percent of GNP in 1984. Due in part to its smaller size, Korea's more specialized industrial sector relies on imports of capital goods and intermediate goods for processing. In fact, the increase in Korea's manufactured exports induces greater imports in these two categories of products. Seoul finds itself in the middle of the U.S.-Japan trade dispute, with an increasing surplus with the United States, its major export market, and an increasing deficit with Japan, from which it buys the capital goods necessary for its exports.

But as exports of consumer goods trail well behind imports of capital goods from Japan, Seoul runs a chronic bilateral trade deficit. Korea's trade deficit with Japan since 1965 represents nearly 90 percent of its total trade deficit during that period. The deficit, however, is more a result of the self-sufficient nature of Japan's industrial sector than of any current protectionism. A 1979 survey by the Industrial Bank of Korea found that the share of restricted commodities in Korea's total exports by country of destination amounted to 18.9 percent relative to Japan, compared with 34.1 and 27.4 percent for the United States and the European Community, respectively. An understanding of the trade pattern between Japan and Korea makes the boomerang problem appear less serious to Japan. Rising Korean manufactured exports induce greater imports of manufactured products from Japan. The loss of market share to Korean firms, either in Japan or in third countries, is at least partially offset by increased exports by Japan to Korea.

For further information, contact Randall S. Jones.

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The views expressed in this report are those of the author and do not necessarily reflect those of the Japan Economic Institute.

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Congress: Still Boiling Mad?

Capitol Hill watchers have been saying for some weeks now that congressional acrimony toward U.S. trading partners, particularly Japan, has peaked and will not resurface soon or with the same stridency seen in September. The Reagan administration's fall offensive against protectionist sentiment can chalk up a victory on that score according to most. But on the rhetorical level, at least, the opposite impression is conveyed in the messages delivered to administration representatives at recent congressional hearings.

During a Senate session concerning U.S.-Japan semiconductor trade, Alfonse D'Amato (R, N.Y.) angrily declared that Japan is "robbing the United States of its productive genius," and demanded that the administration respond. Rep. Ron Wyden (D, Ore.) of the House Ways and Means oversight subcommittee asserted that the trade issue is still "red hot" as far as his

The Japanese system takes a more paternalistic attitude toward the wireless market than the United States does by maintaining links to the "independent" equipment certification panel and to the ex-public telephone company, Nippon Telegraph and Telephone Corp. Foreign manufacturers cannot provide the testing and data required for equipment approval but must submit the product to a certification panel that has personnel links with major Japanese electronics makers. Although current law allows for type approval of 12 classes of wireless equipment, the items of greatest interest (cellular telephones, pocket pagers and remote terminal equipment) are not included, and must incur high customs inspection costs.

According to U.S industry representatives, sales of cellular telephone systems, other two-way communications equipment and mobile paging systems in Japan totaled an estimated $500 million in 1984. Based on forecasts that the market could quadruple in a short time, American companies are interested in increasing their market share. Driven by industry complaints, U.S. negotiators have been campaigning for major changes in the Japanese regime. The Reagan administration wants Japan to accept manufacturer-generated test data, and to purge the old paternalism by ending administrative guidance on two-way radio services and by allocating more frequencies for commercial use.

As Tokyo sees it, no apologies are necessary since Japan's system is similar to those in Europe. If U.S. companies can compete in Europe where wireless standards vary almost from country to country, the Japanese market should present no difficulties, they reason.

Still, Japanese officials are moving to solve some issues. Although there is little motion on the issue of manufacturer-generated test data, the government is likely to update standards to allow for advances in mobile telephones and paging devices. In addition, it is giving serious consideration to allowing sales of cellular telephones based on U.S. technical standards rather than NTT's.

With sectoral negotiations scheduled to conclude by the end of the year, the chances that U.S. negotiatiors will get all the changes they want are relatively low. Since there are no advisory councils studying a complete overhaul of the radio communications regulatory framework, legislation mandating major changes will probably not be introduced in the coming session of the Diet. Even the changes Tokyo seems willing to make will not take effect until April 1, 1986 at the earliest. The issue could turn out to be a live wire, sparking trade frictions at a time when they are already plentiful. The success of foreign companies in the much-larger cable telecommunications market, however, could pull the plug on the issue.

Jon Choy

Japan-European Community Trade

European leaders told a visiting Japanese business mission last week that Tokyo's measures to reduce its trade surplus should not be limited to the United States at the expense of Europe. The European Community's high unemployment rate of 10.3 percent in 1984 and its large trade deficit with Japan has led to rising protectionist pressures. The Japanese mission, headed by Yoshihiro Inayama, chairman of Keidanren, was urged to increase its purchases of European goods, particularly aircraft produced by the Airbus consortium.

From the end of 1980 to this past spring, the yen appreciated 26 percent against the German mark and 66 percent relative to the French franc. Economic growth in the EC averaged only 1.3 percent a year in real terms during the past three years, compared to an inflation-adjusted annual rate of 4.2 percent in Japan. Despite the appreciation of the yen and faster growth in Japan, Tokyo's trade surplus with the EC increased from $9.5 billion in 1982 to $10.1 billion in 1984.

West Germany and the United Kingdom, which absorb 58 percent of Japan's exports to the EC, had bilateral trade deficits with Japan in 1984 of $3.9 billion and $2.4 billion, respectively. Of the 10 EC countries, only Italy, a major exporter of textiles to Japan, had a trade surplus with Japan last year.

Japan's Trade with the European Community

(in millions of dollars)

	1982	1983	1984	January-August 1984	January-August 1985
Exports					
Belgium	$ 1,155	$ 1,325	$ 1,339	$ 873	$ 844
Denmark	442	595	937	444	511
France	2,318	2,010	1,935	1,293	1,261
Greece	585	908	791	605	455
Ireland	202	214	248	160	164
Italy	864	874	1,032	657	676
Luxembourg	6	10	10	8	10
Netherlands	1,661	1,726	1,816	1,219	1,219
United Kingdom	4,813	4,983	4,675	3,200	3,039
West Germany	5,018	5,877	6,622	4,307	4,106
Total	17,064	18,523	19,405	12,766	12,283
Imports					
Belgium	338	376	469	311	328
Denmark	267	373	878	494	374
France	1,215	1,302	1,236	837	864
Greece	38	29	76	67	52
Ireland	184	262	239	174	135
Italy	942	980	1,049	709	716
Luxembourg	1	1	1	1	1
Netherlands	347	443	434	303	289
United Kingdom	1,874	1,940	2,267	1,560	1,144
West Germany	2,355	2,414	2,684	1,794	1,894
Total	7,560	8,120	9,334	6,250	5,796

Source: Japan Tariff Association

Japan is a net importer of textiles from the EC, while its major exports include autos, office machinery, ships and consumer electronic goods. Most car exports go to West Germany and the United Kingdom, as several countries limit Japanese auto imports. In 1984, for example, only some 2,000 Japanese cars were sold to Italy. Chemicals and machinery and equipment account for about one-half of Japanese imports from the EC.

Despite concern over its trade deficit with Japan, the European Community's worldwide current account balance is comfortably in surplus, totaling $3.5 billion in 1984. The Organization for Economic Cooperation and Development predicts that the surplus will increase to $11.5 billion this year. The improvement in the EC's current account balance from its 1982 deficit of $8.7 billion is largely the result of a swing from a $3.5 billion deficit in 1982 with the United States to a $13.3 billion surplus last year.

Randall S. Jones

Notes

- Fulfilling prior commitments, the Ministry of Finance on October 15 approved the applications of two American banks to participate in trust banking operations in Japan. Morgan Guaranty Trust Co. and Bankers Trust Co. will move ahead with plans to establish wholly owned Japanese subsidiaries with an initial capitalization of Y1 billion ($4.5 million). Both banks have already announced business links with major Japanese trust institutions: Morgan will work with Mitsui Trust and Banking Co., Ltd., while Bankers Trust will tie up with Sumitomo Trust and Banking Co., Ltd. Hoping to get a leg up on the other four American and three European banks soon to join their ranks, the new companies plan to open their doors for business on October 28. MOF approval of the remaining applicants is expected before year's end.

- The opening of Japan's first bond futures market October 19 will stimulate the already soaring trade in government bonds. Futures trading will allow investors to hedge against price fluctuations by concluding contracts to buy or sell bonds at a given price within 15 months. Trading in bond futures on the Tokyo Stock Exchange is expected to total about Y50 trillion ($232.6 billion) in the first year, about one-half the annual turnover of spot bond transactions. Given the Y100 million ($465,000) minimum trading unit, the market is expected to be dominated by institutional and corporate investors. The 138 financial institutions allowed to take part in the market include five foreign securities firms. It was also announced recently that the London International Financial Futures Exchange and the Chicago Board of Trade plan to develop a contract for Japanese government bonds and hope to begin trading within a year.

- In an apparent setback for the U.S. government and Japanese whalers, an insufficient number of all the judges sitting on the U.S. Court of Appeals for the District of Columbia agreed to review a ruling by three of its members that could lead to harsh action against Japanese fishermen (see JEI Report No. 31B, August 16, 1985). The October 16 decision revolves around the appeals court's interpretation of what constitutes a majority of justices in a petition for rehearing *en banc*. Two of the nine judges currently sitting on the court